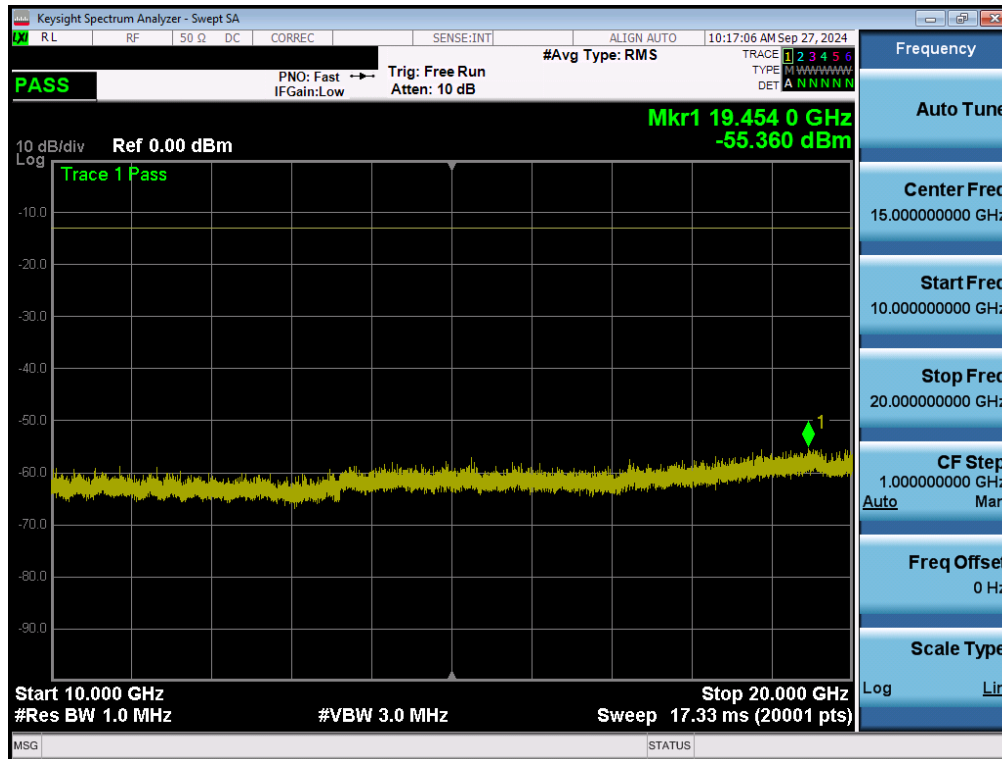
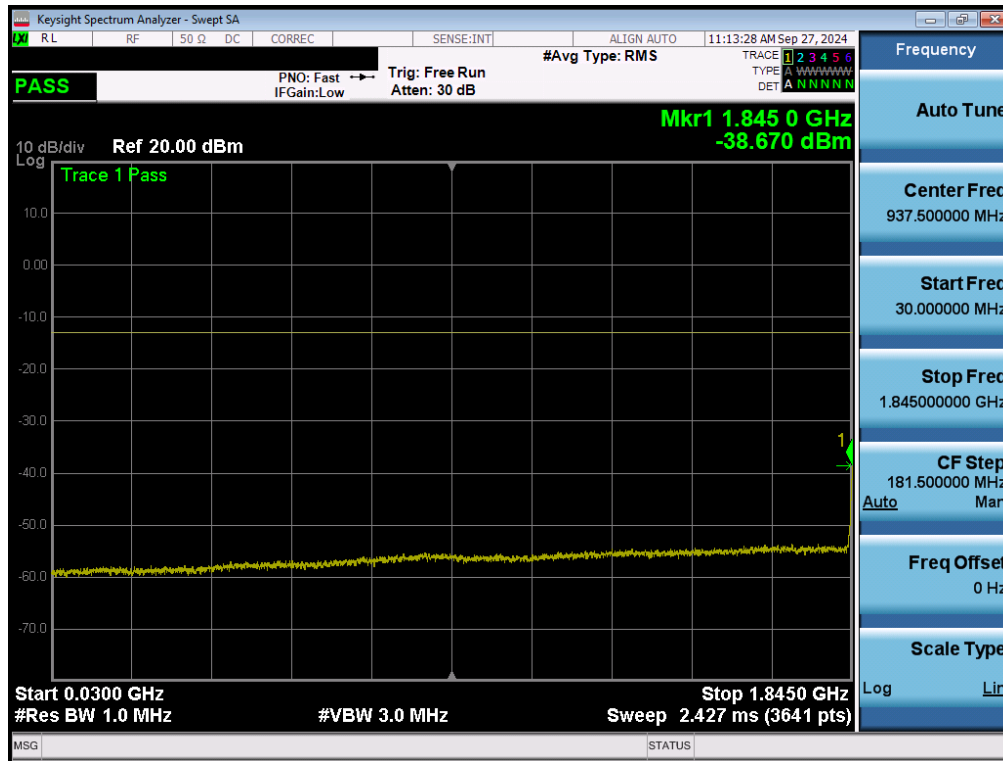




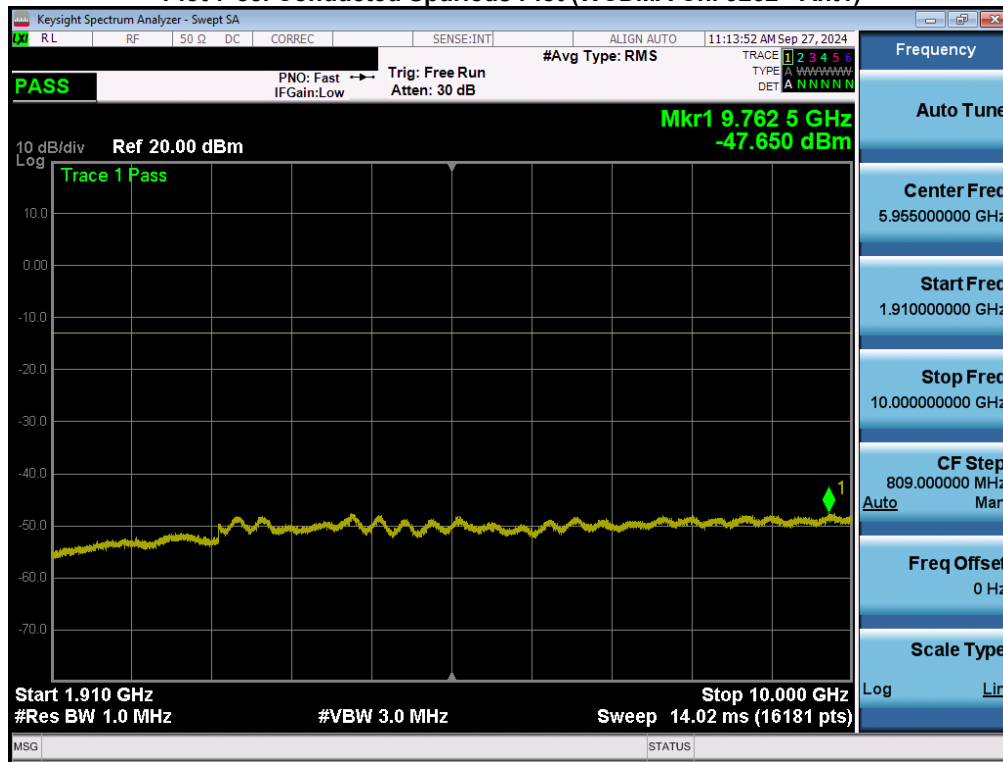
Plot 7-84. Conducted Spurious Plot (GPRS Ch. 810 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 61 of 174

WCDMA PCS – Ant1

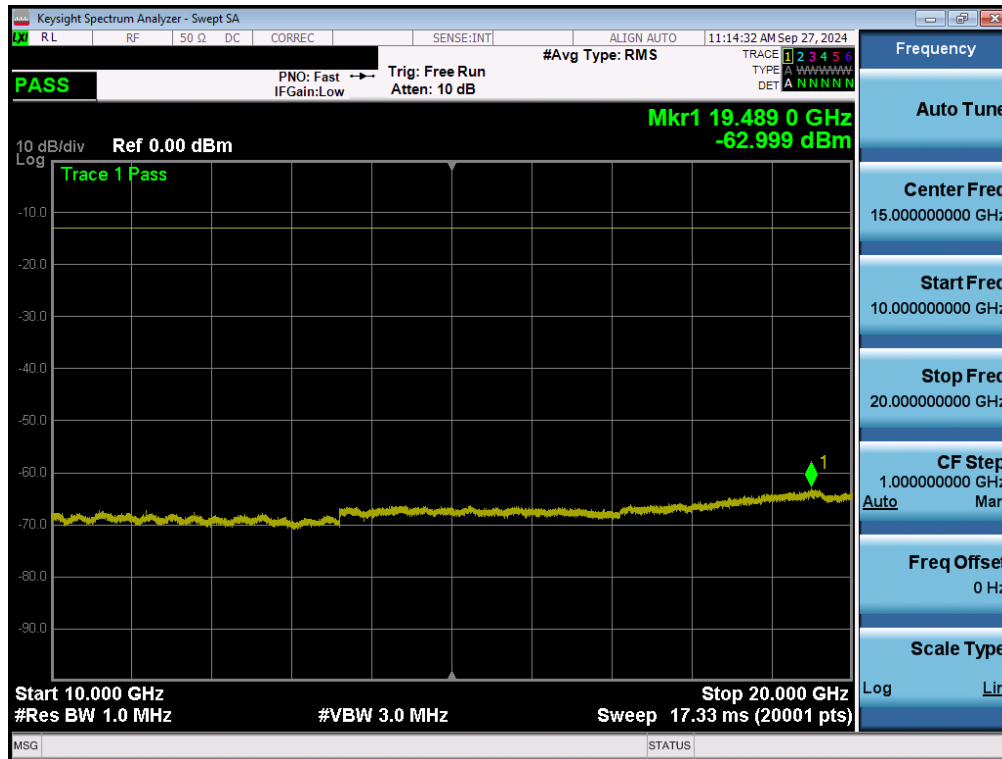


Plot 7-85. Conducted Spurious Plot (WCDMA Ch. 9262 - Ant1)

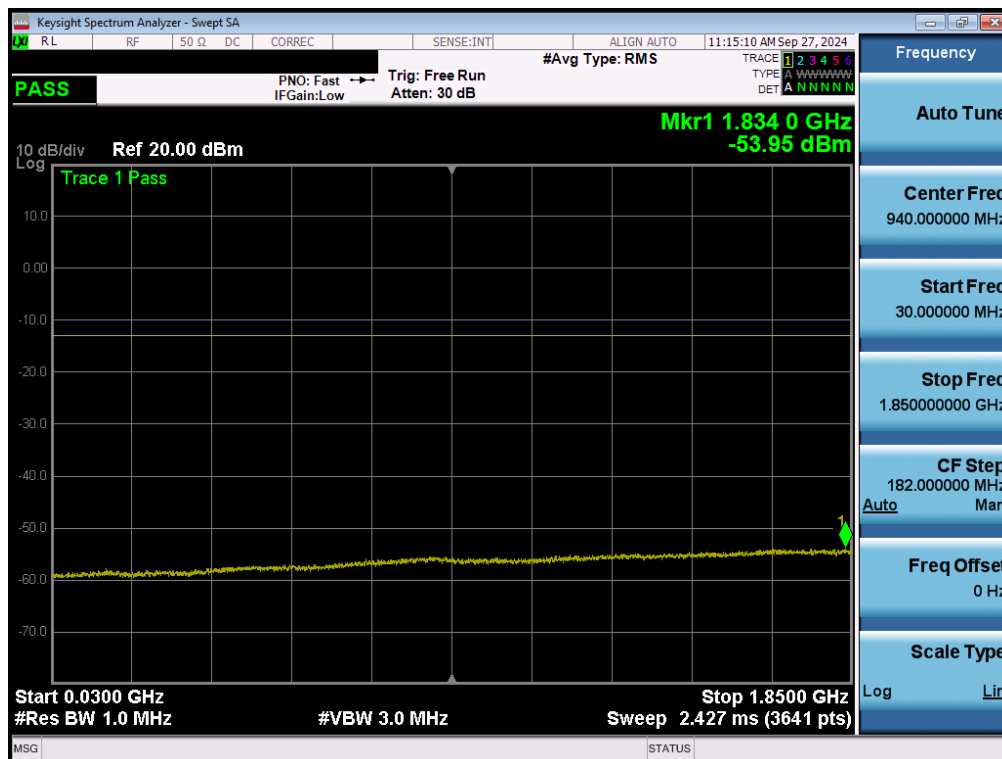


Plot 7-86. Conducted Spurious Plot (WCDMA Ch. 9262 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 62 of 174

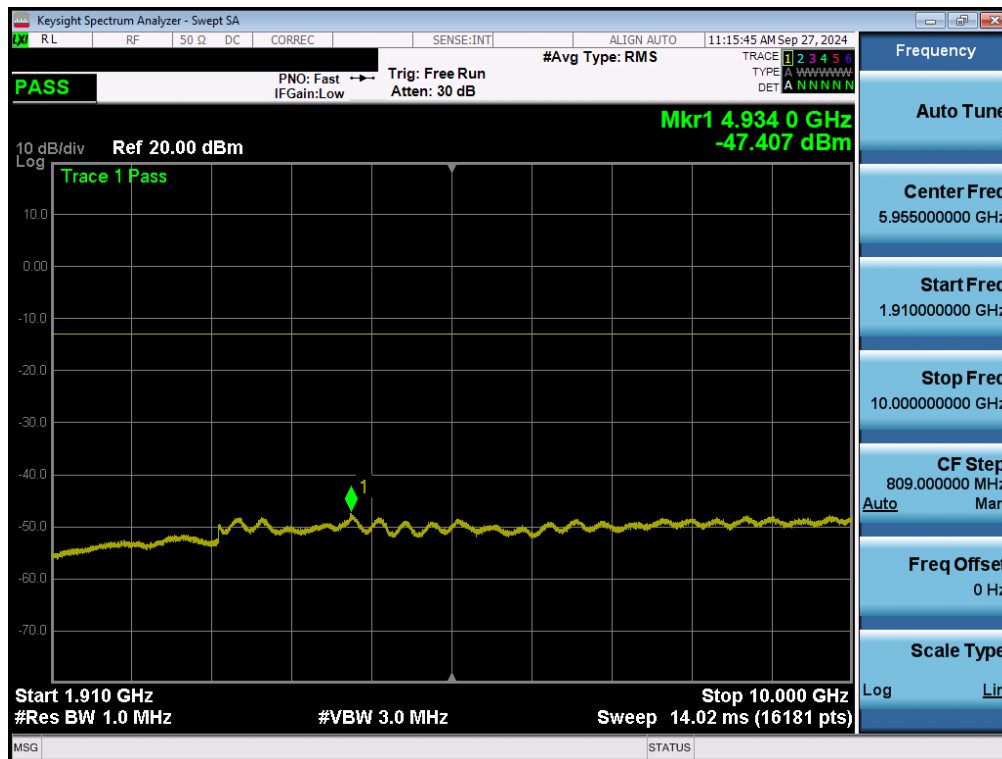


Plot 7-87. Conducted Spurious Plot (WCDMA Ch. 9262 - Ant1)

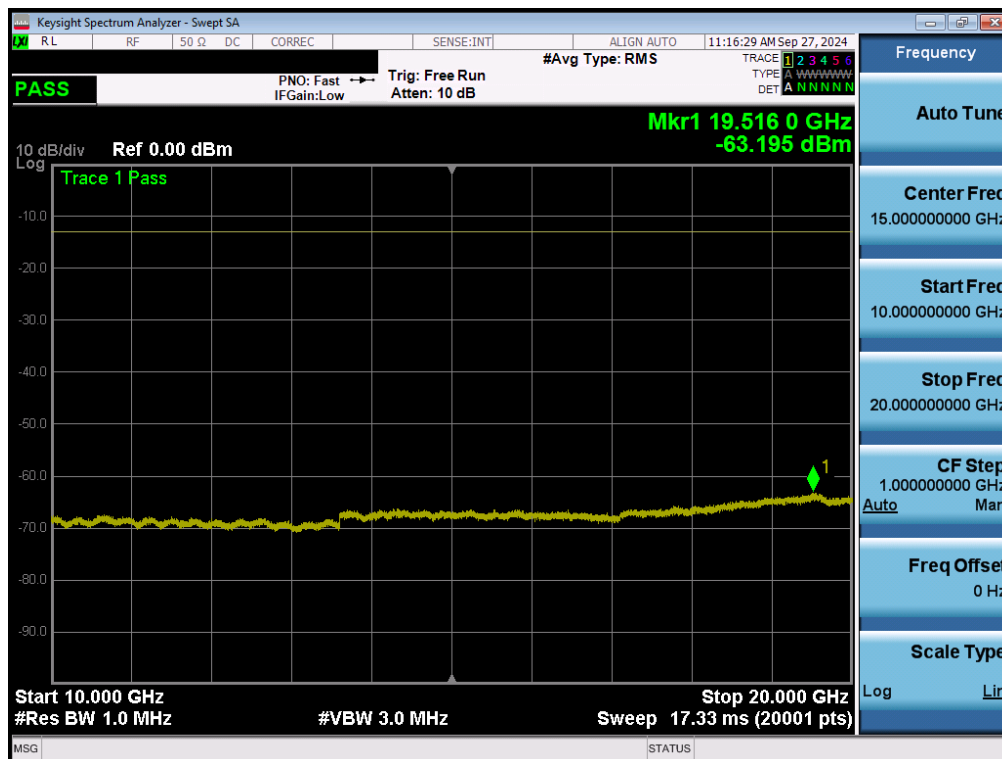


Plot 7-88. Conducted Spurious Plot (WCDMA Ch. 9400 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 63 of 174

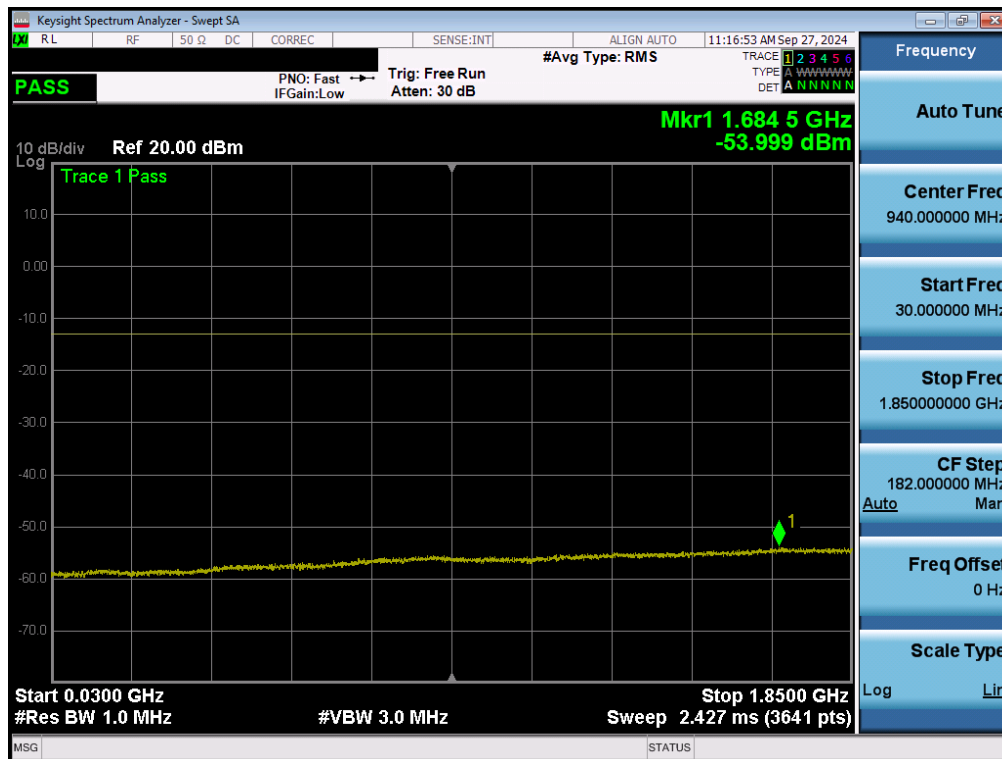


Plot 7-89. Conducted Spurious Plot (WCDMA Ch. 9400 - Ant1)

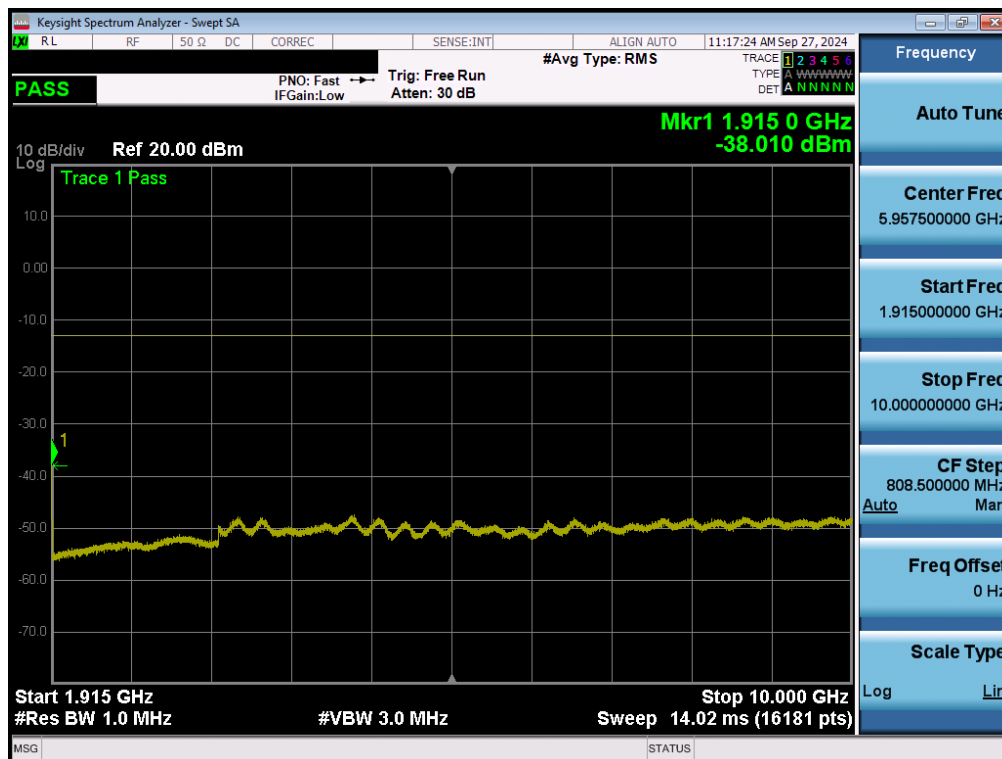


Plot 7-90. Conducted Spurious Plot (WCDMA Ch. 9400 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 64 of 174

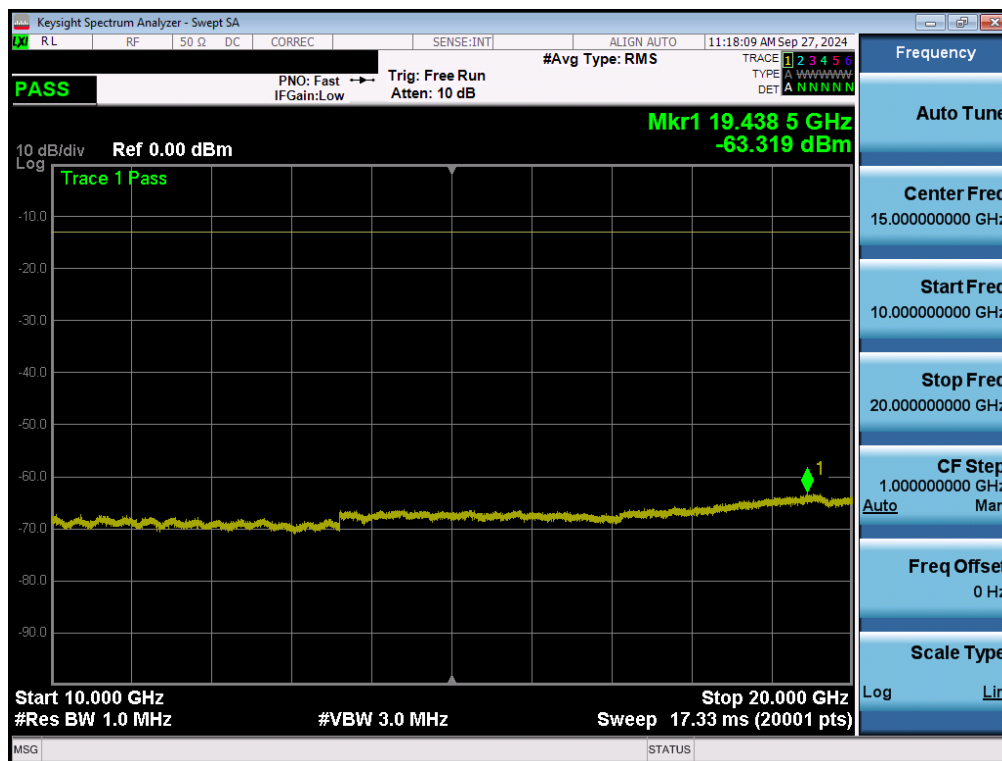


Plot 7-91. Conducted Spurious Plot (WCDMA Ch. 9538 - Ant1)



Plot 7-92. Conducted Spurious Plot (WCDMA Ch. 9538 - Ant1)

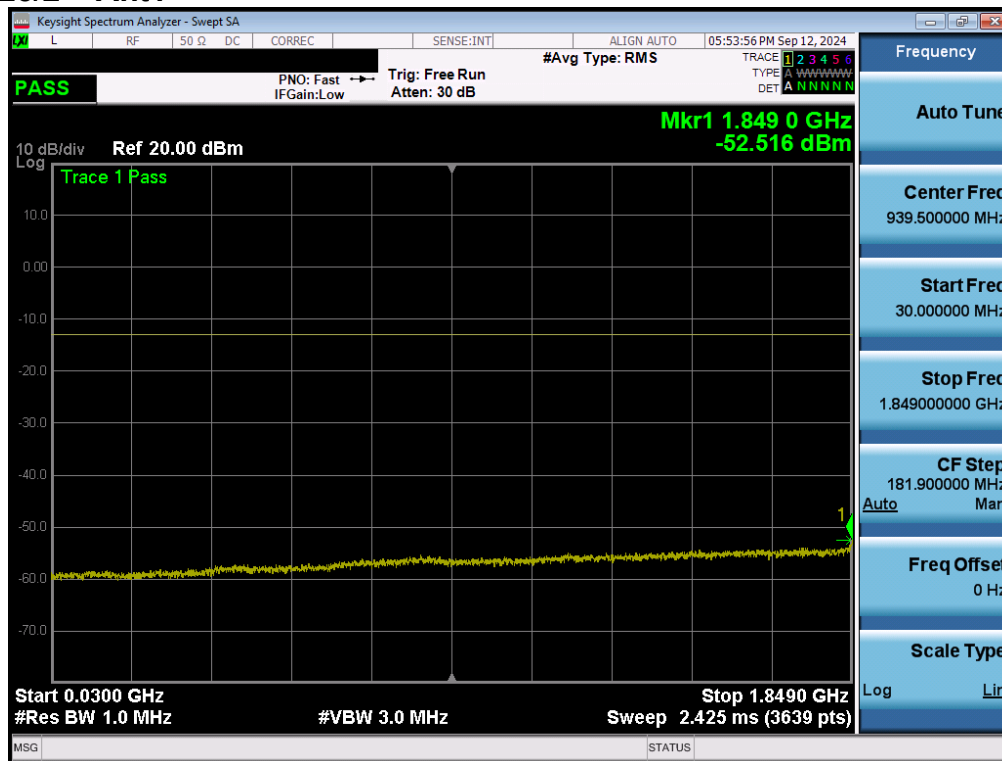
FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 65 of 174



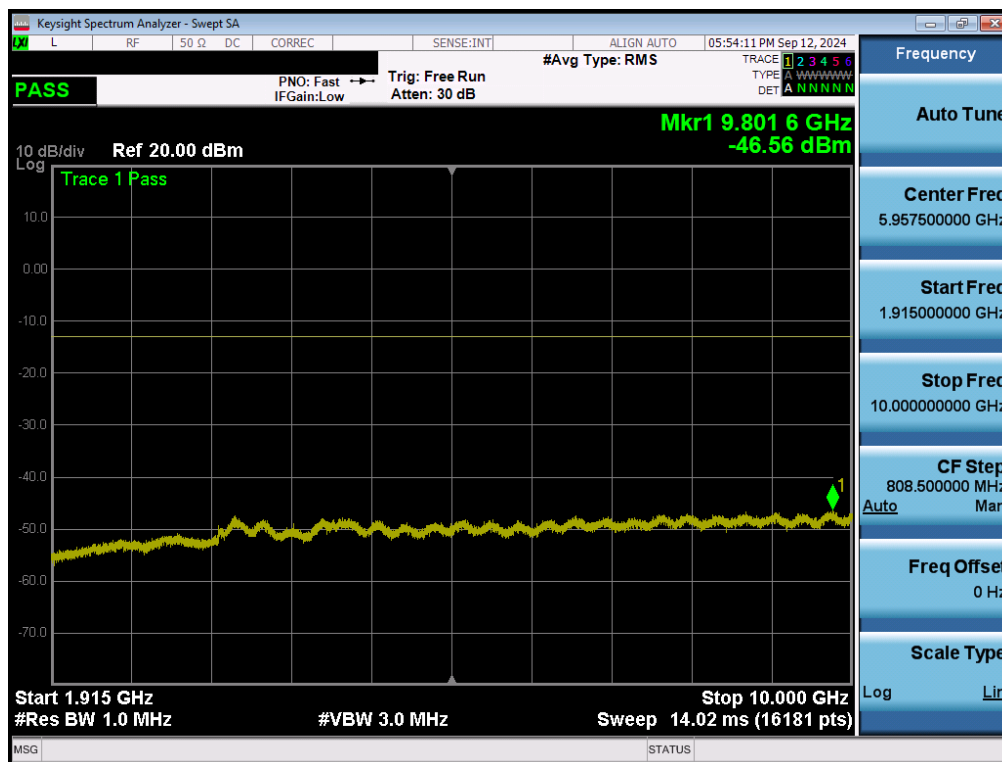
Plot 7-93. Conducted Spurious Plot (WCDMA Ch. 9538 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 66 of 174

LTE Band 25/2 – Ant1

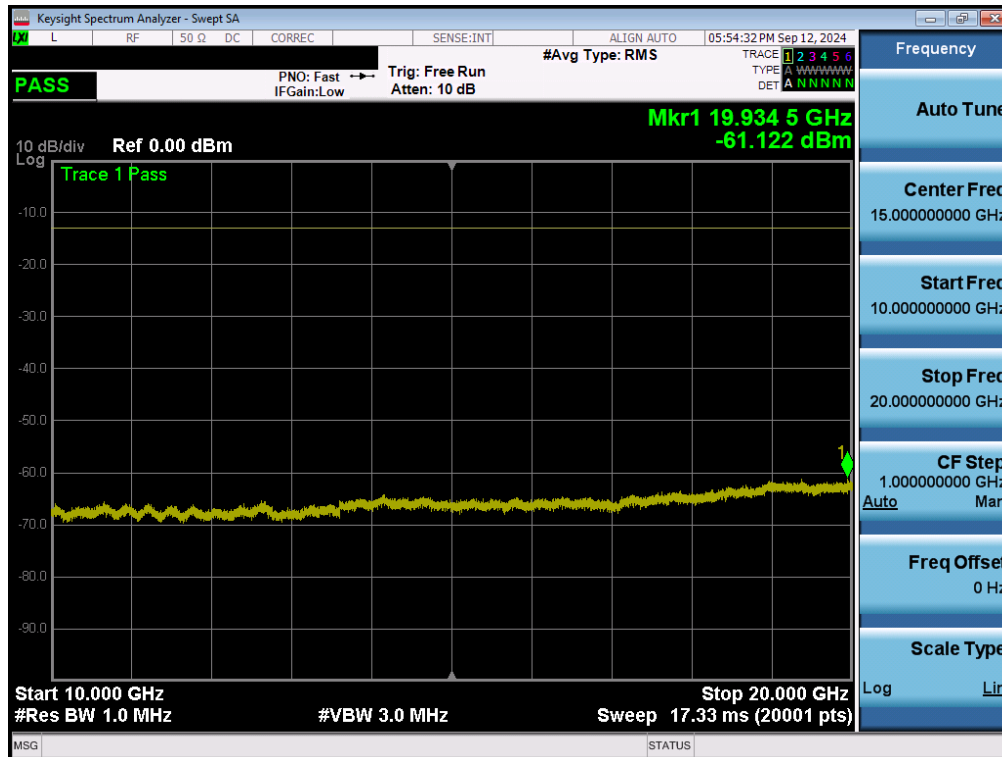


Plot 7-94. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - Ant1)

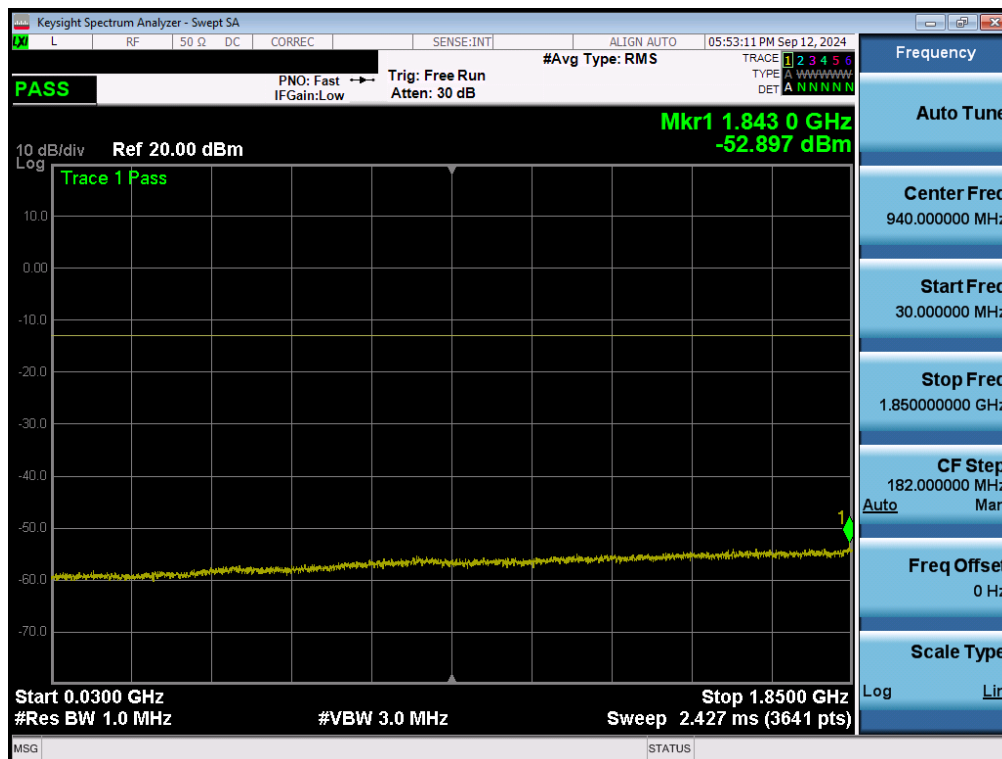


Plot 7-95. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 67 of 174

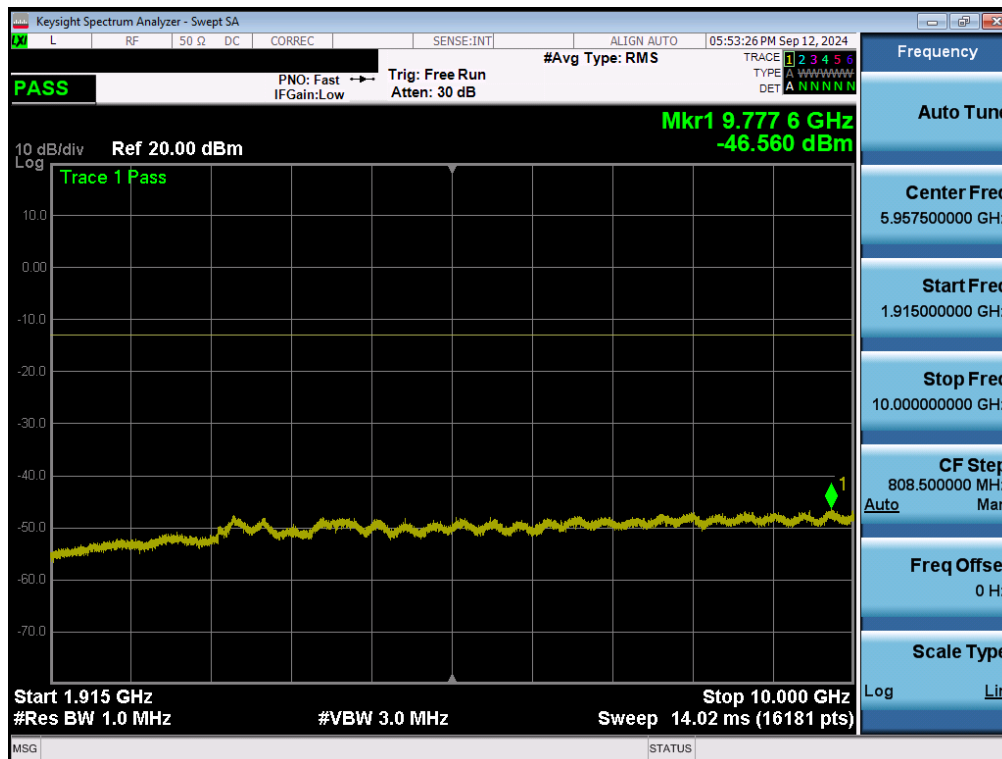


Plot 7-96. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - Ant1)

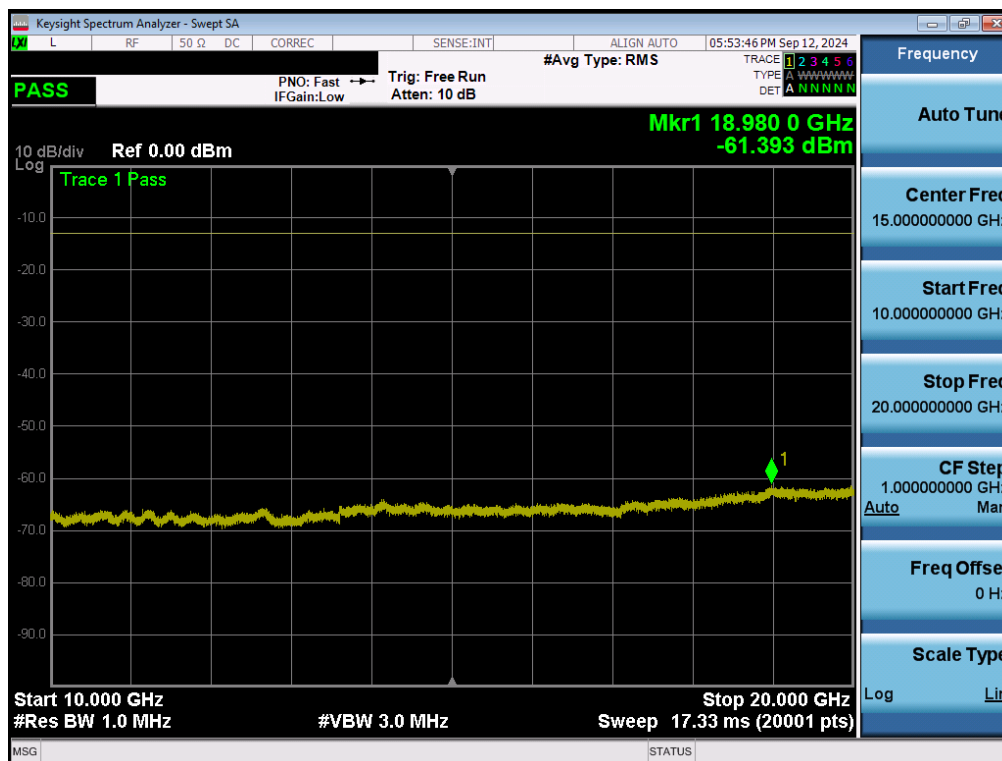


Plot 7-97. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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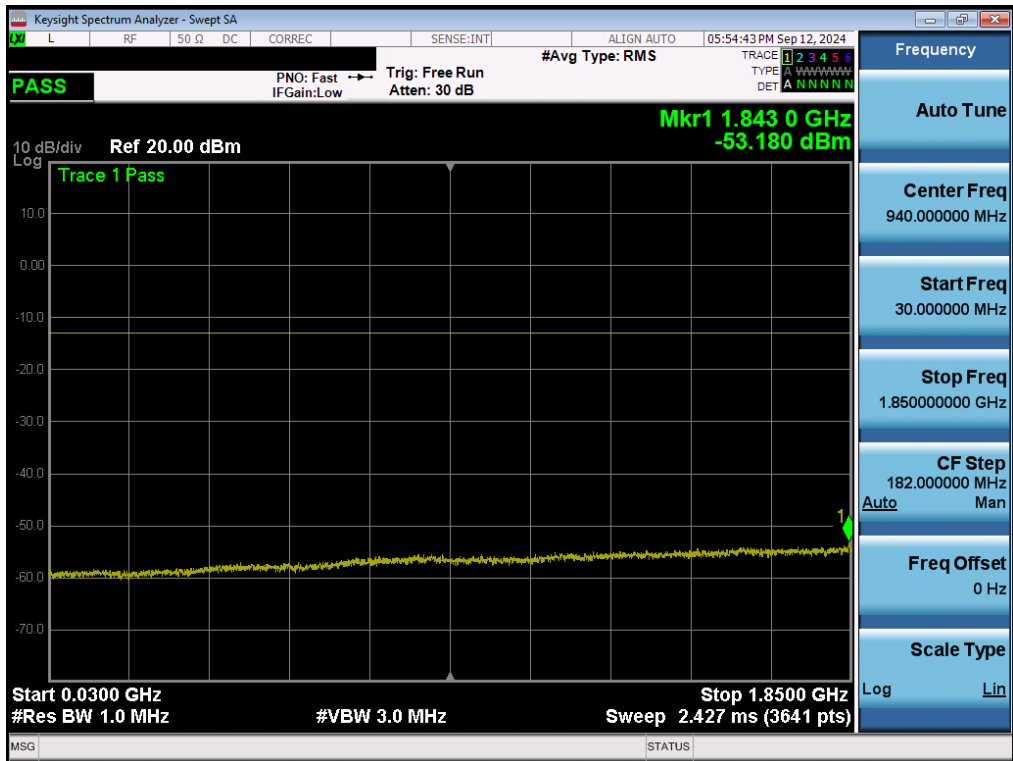


Plot 7-98. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - Ant1)

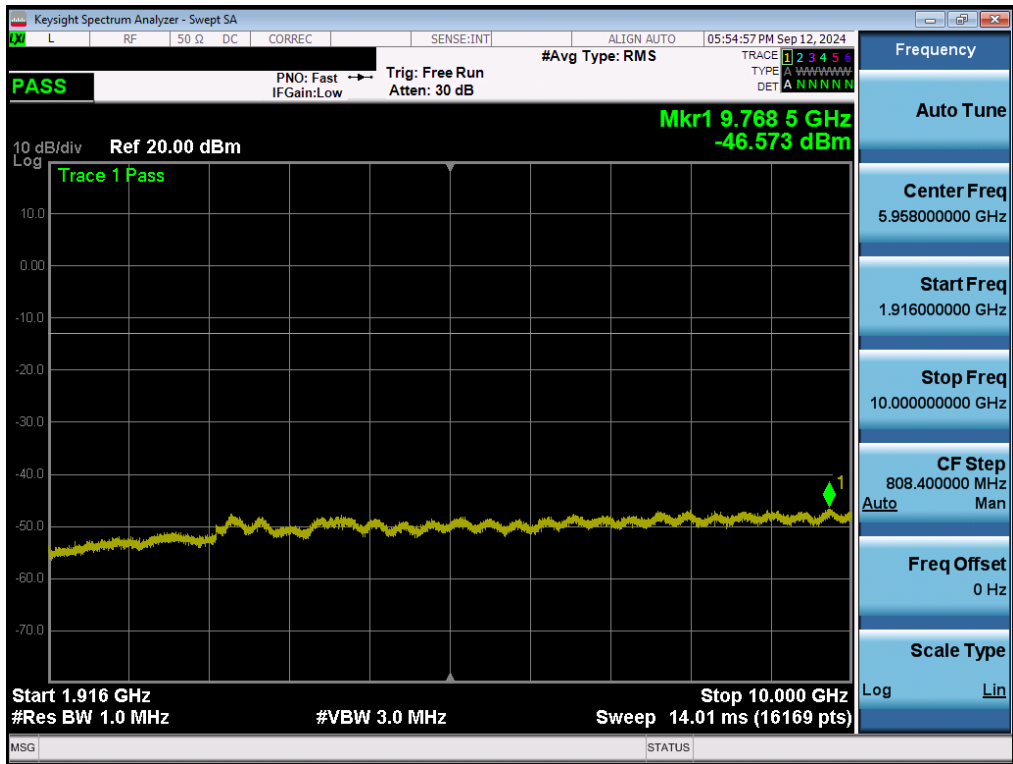


Plot 7-99. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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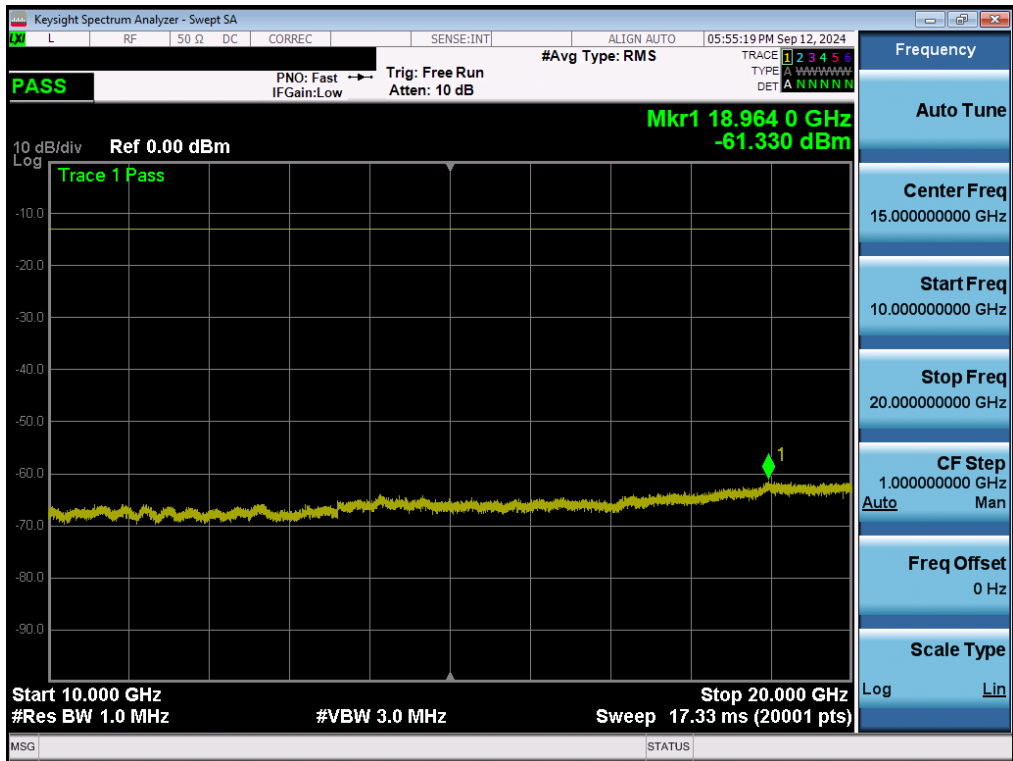


Plot 7-100. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - Ant1)



Plot 7-101. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - Ant1)

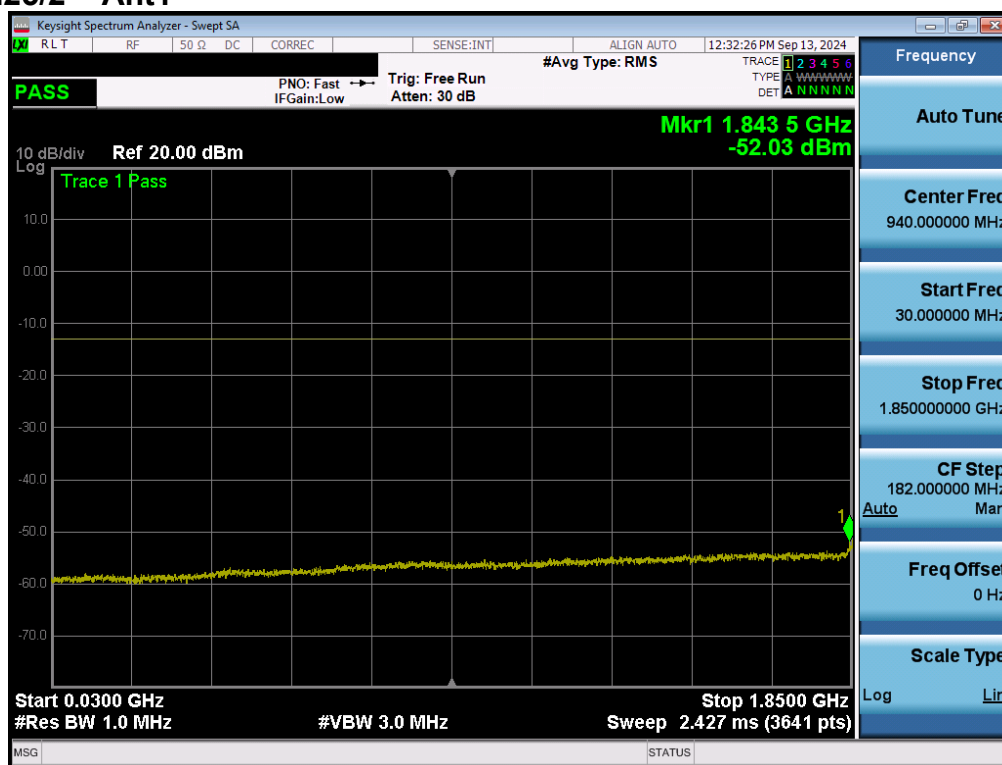
FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 70 of 174



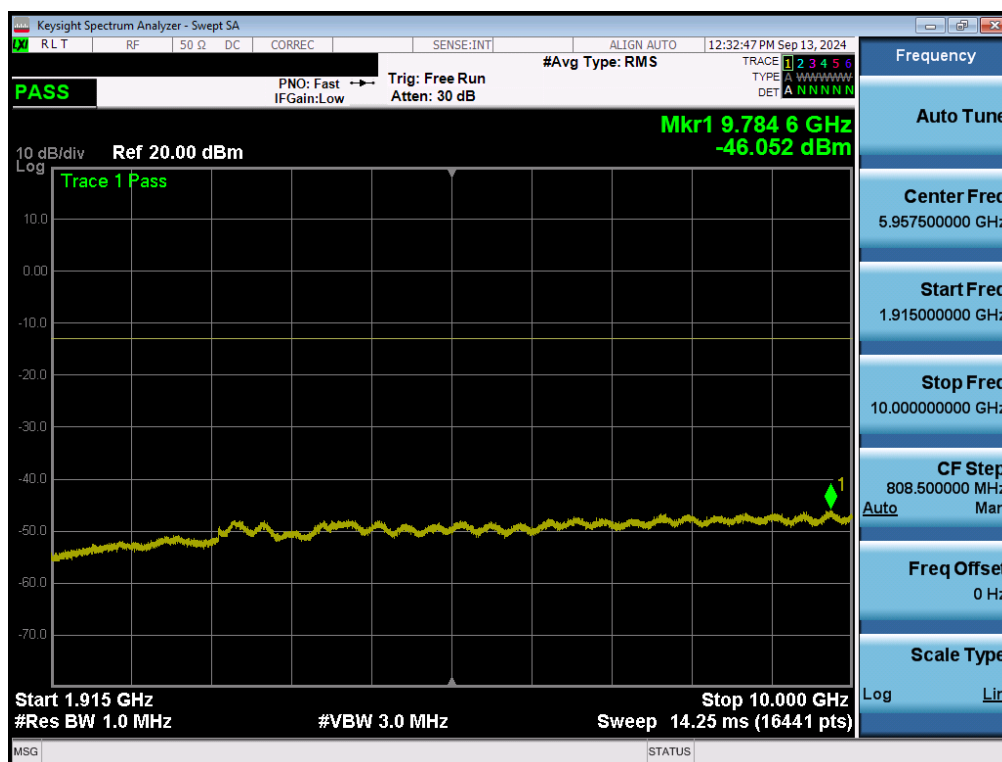
Plot 7-102. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n25/2 – Ant1

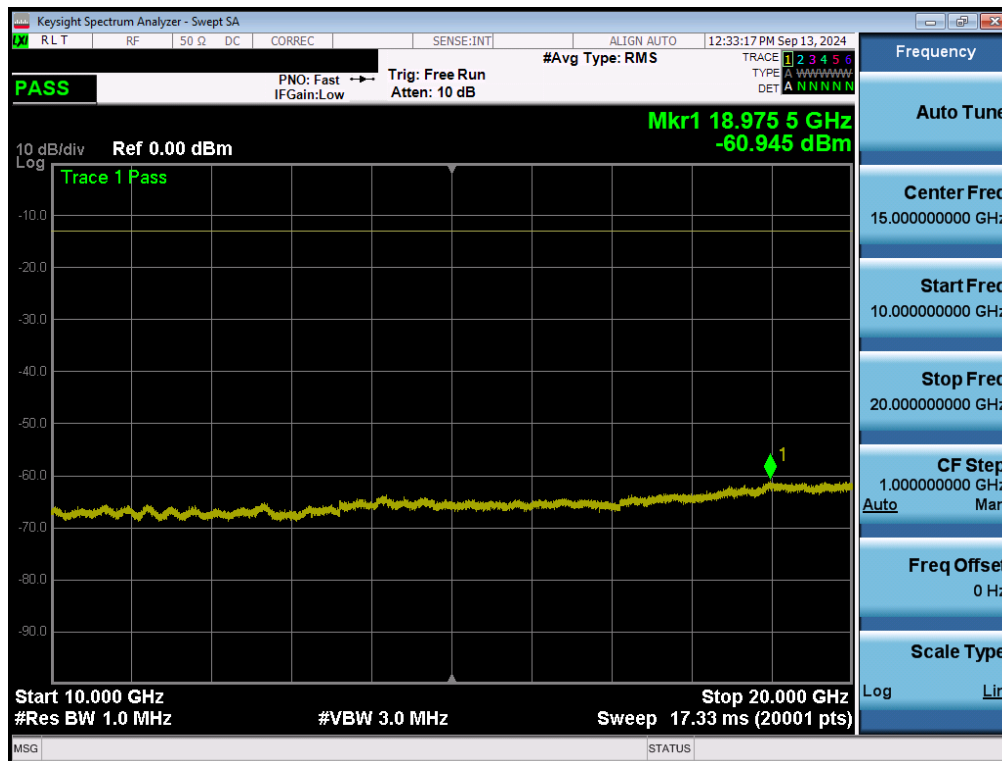


Plot 7-103. Conducted Spurious Plot (NR Band n25/2 -40.0MHz - 1RB - Low Channel - Ant1)

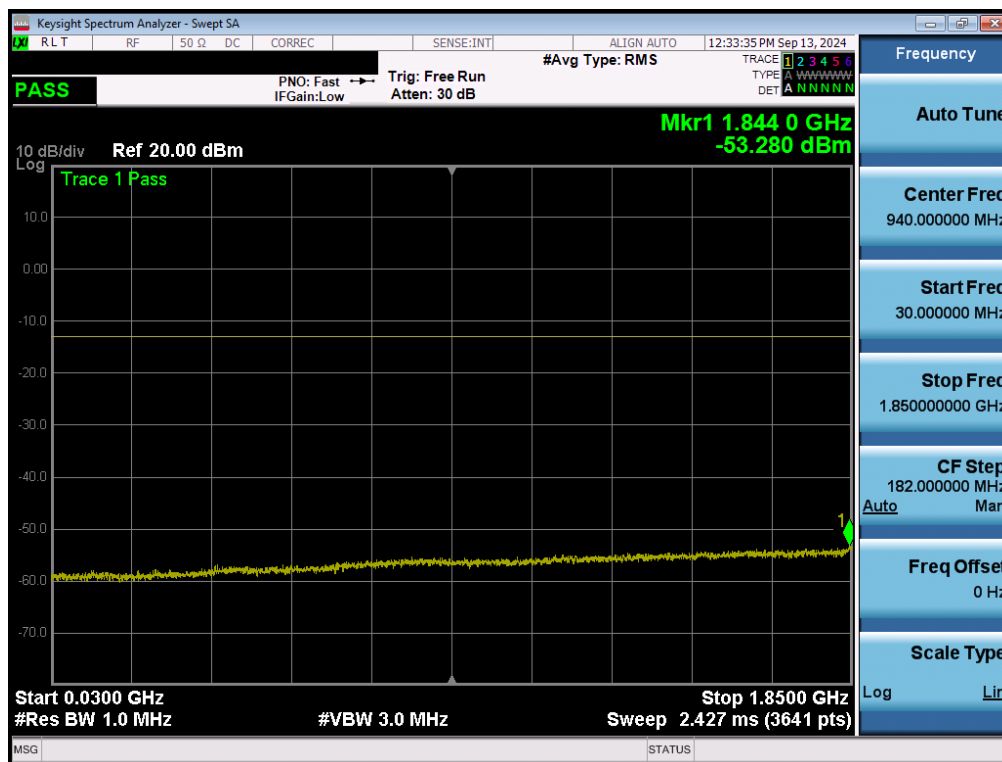


Plot 7-104. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Low Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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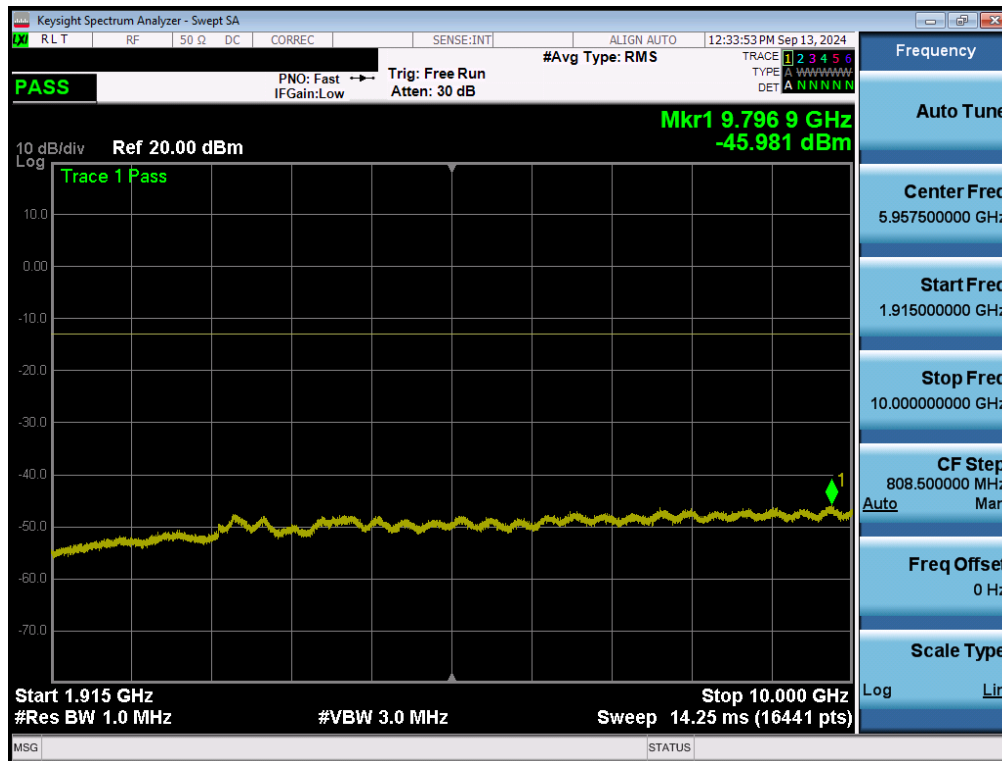


Plot 7-105. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Low Channel - Ant1)

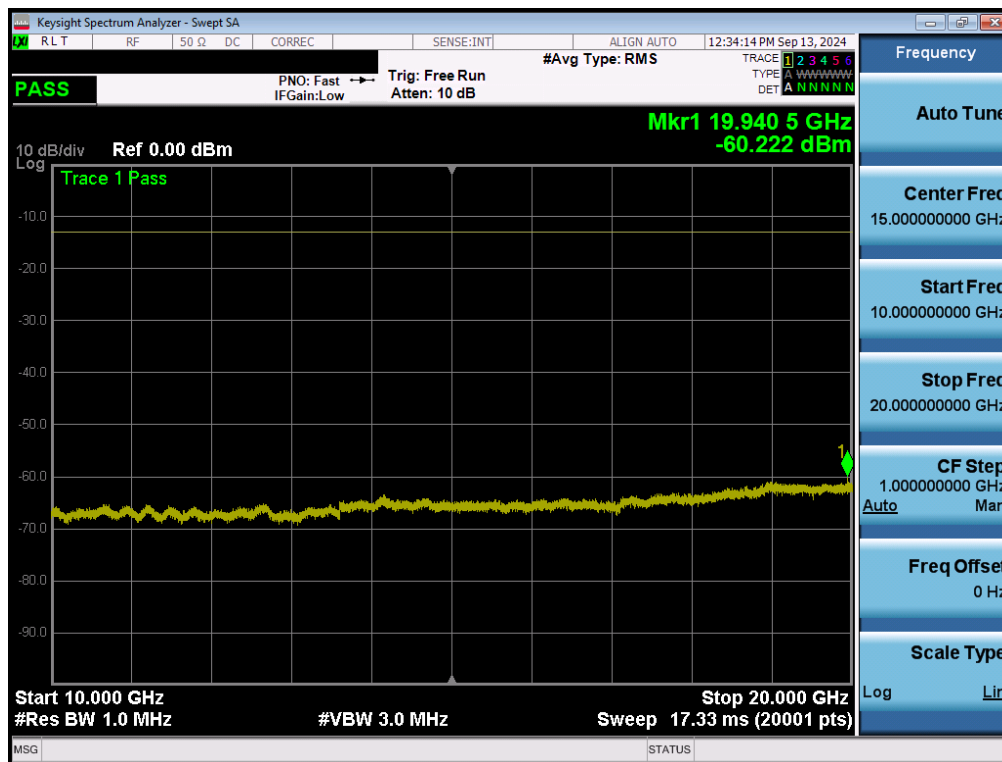


Plot 7-106. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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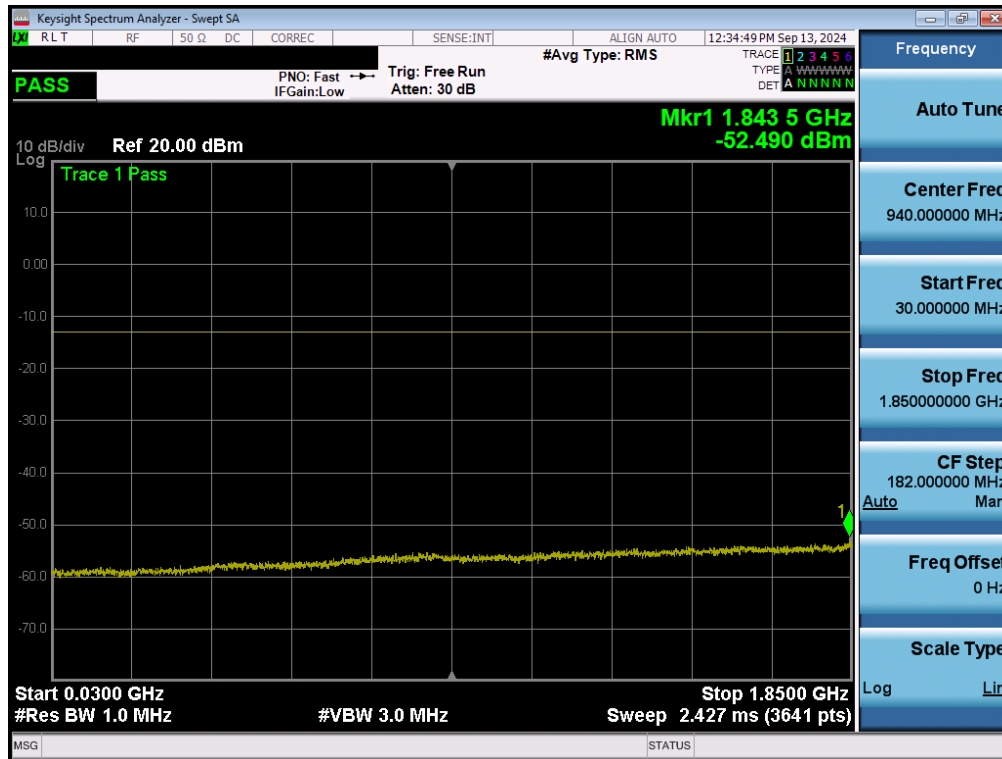


Plot 7-107. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - Ant1)

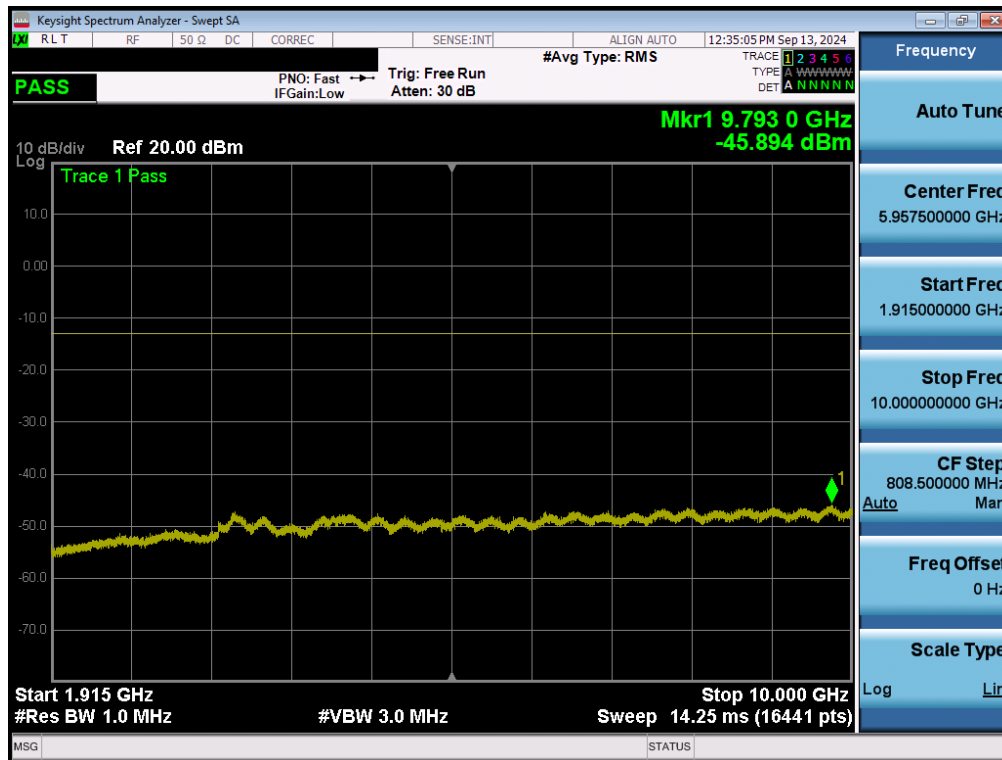


Plot 7-108. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 74 of 174

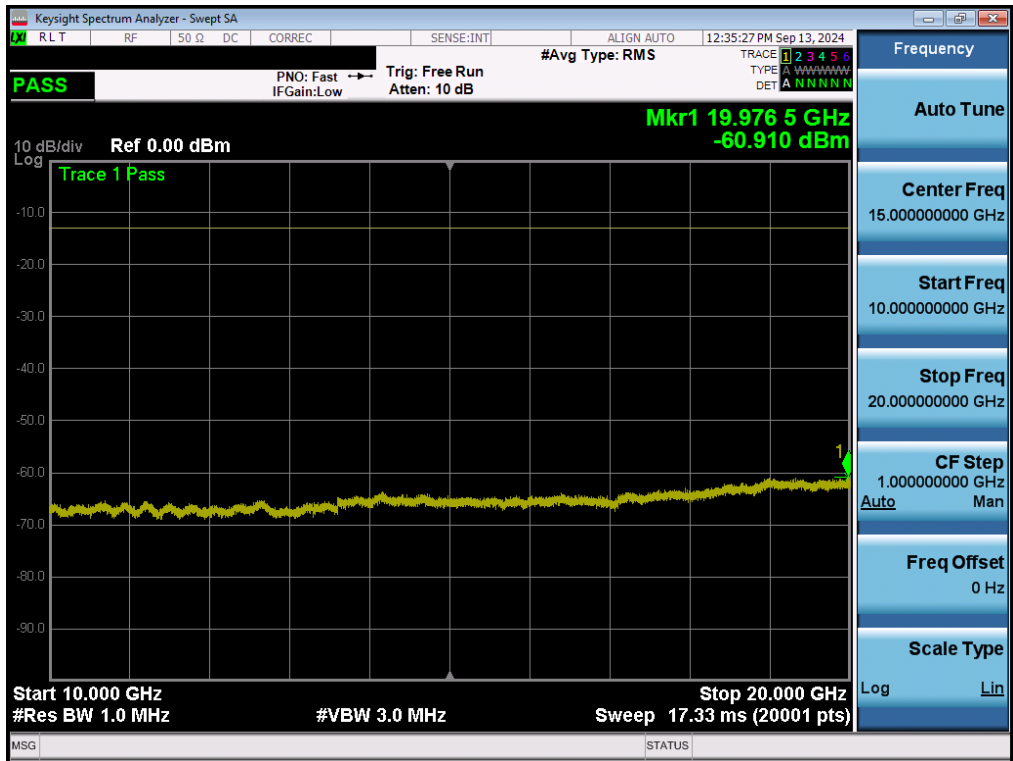


Plot 7-109. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - High Channel - Ant1)



Plot 7-110. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - High Channel - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 75 of 174



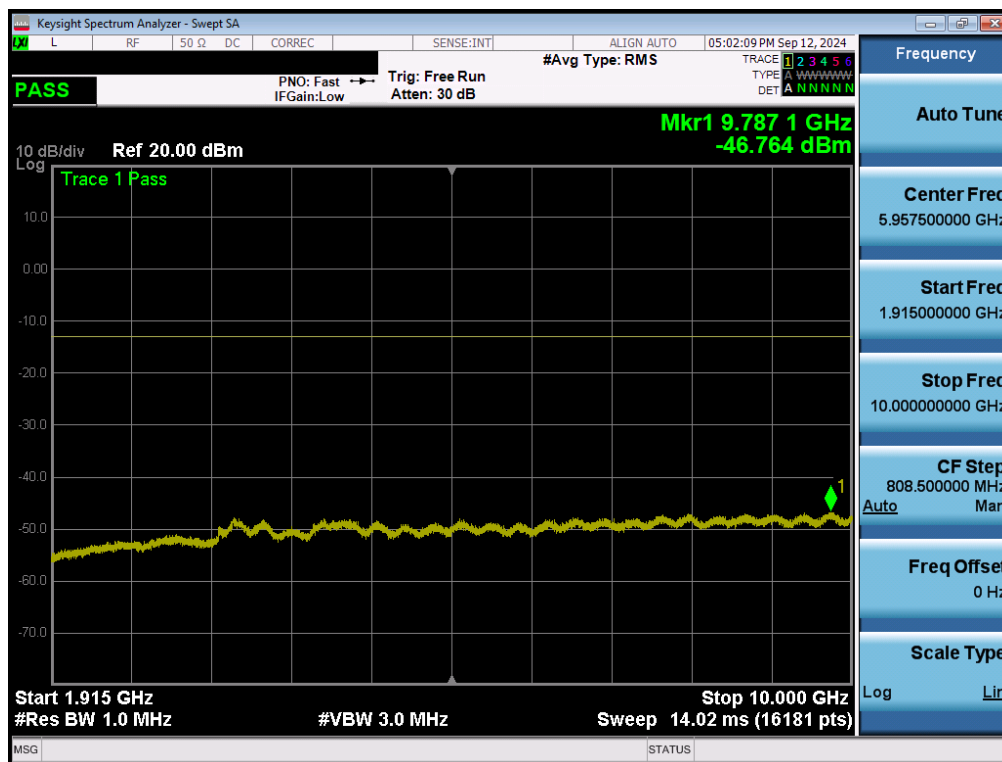
Plot 7-111. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - High Channel - Ant1)

FCC ID: A3LSMS938U		PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 25/2 – Ant2

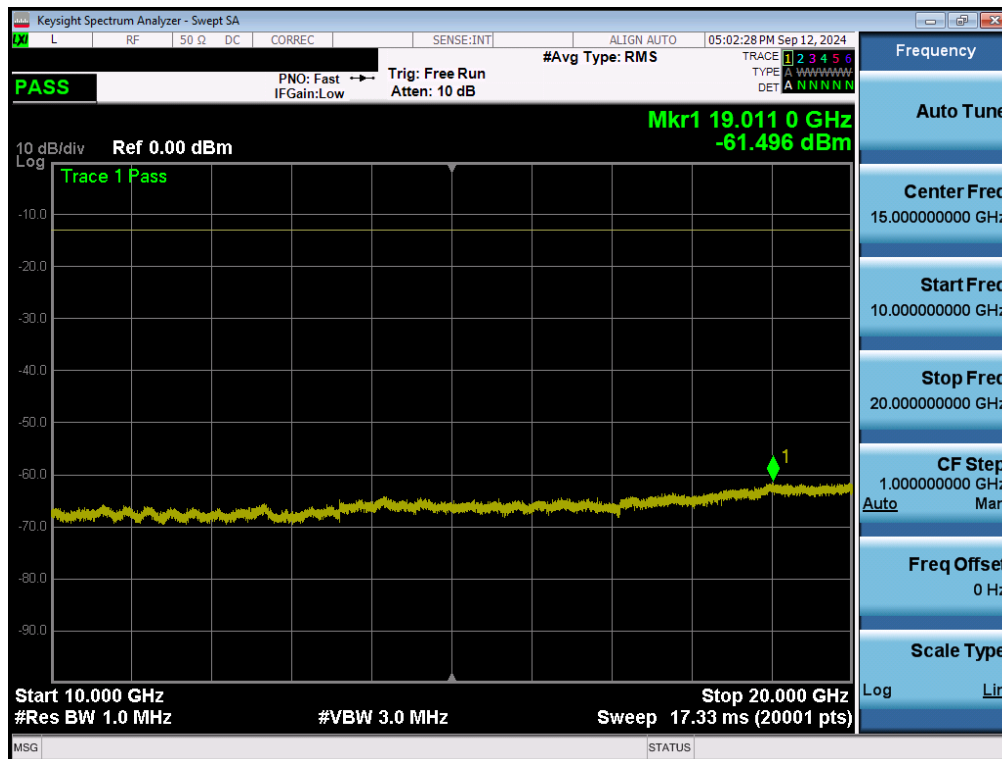


Plot 7-112. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - Ant2)

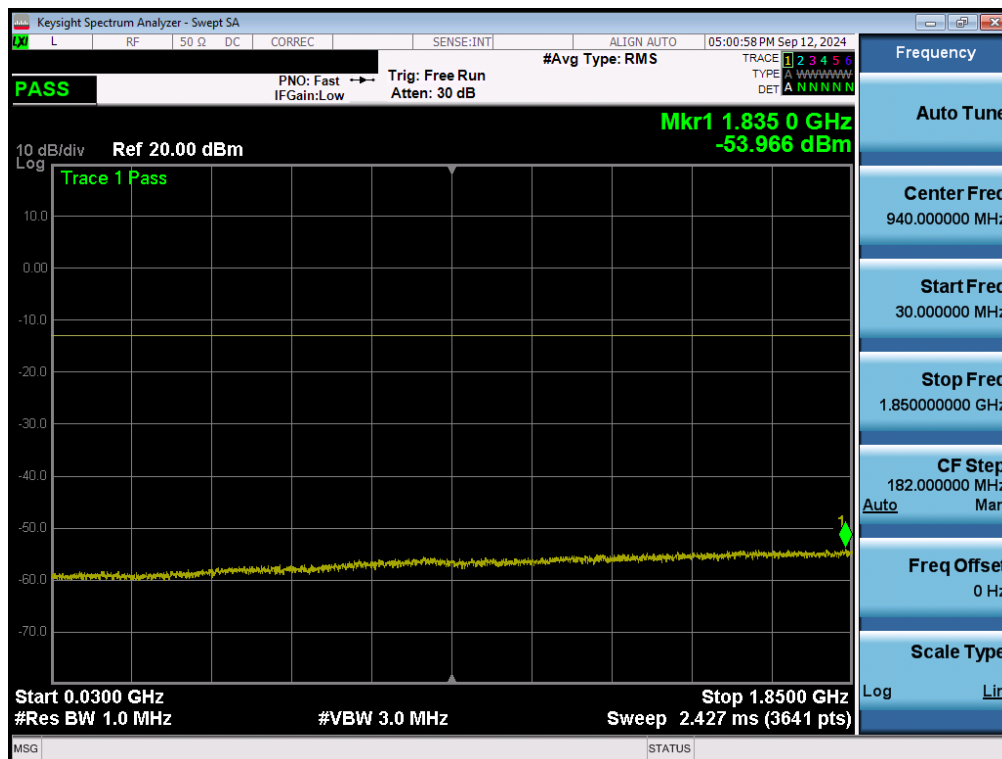


Plot 7-113. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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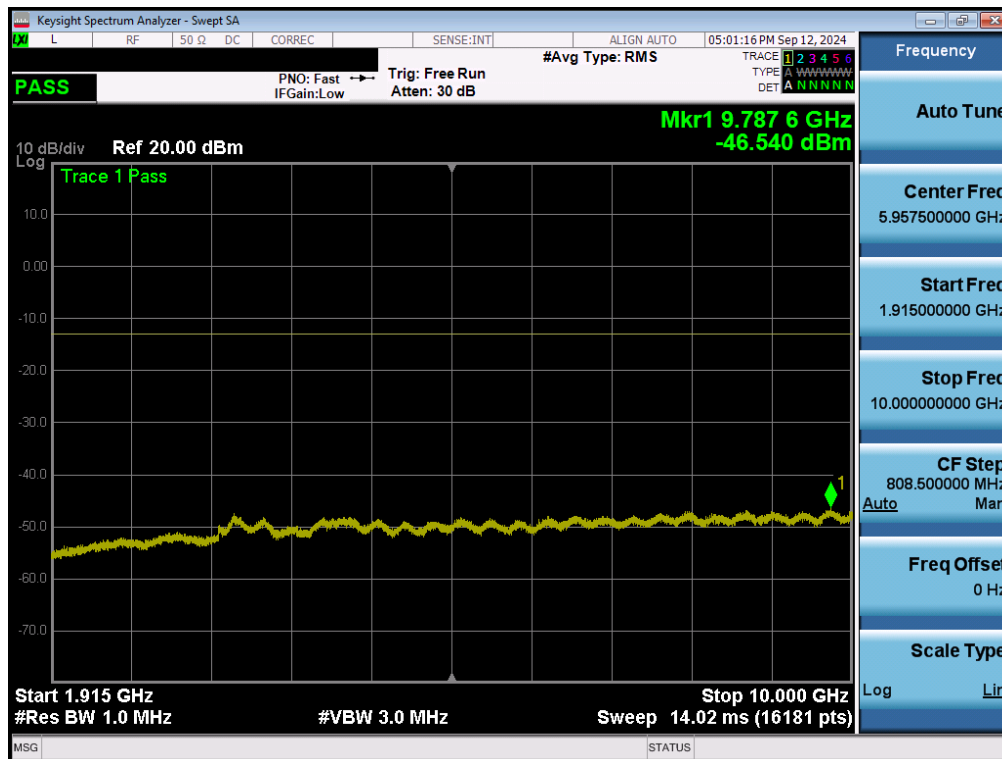


Plot 7-114. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Low Channel - Ant2)

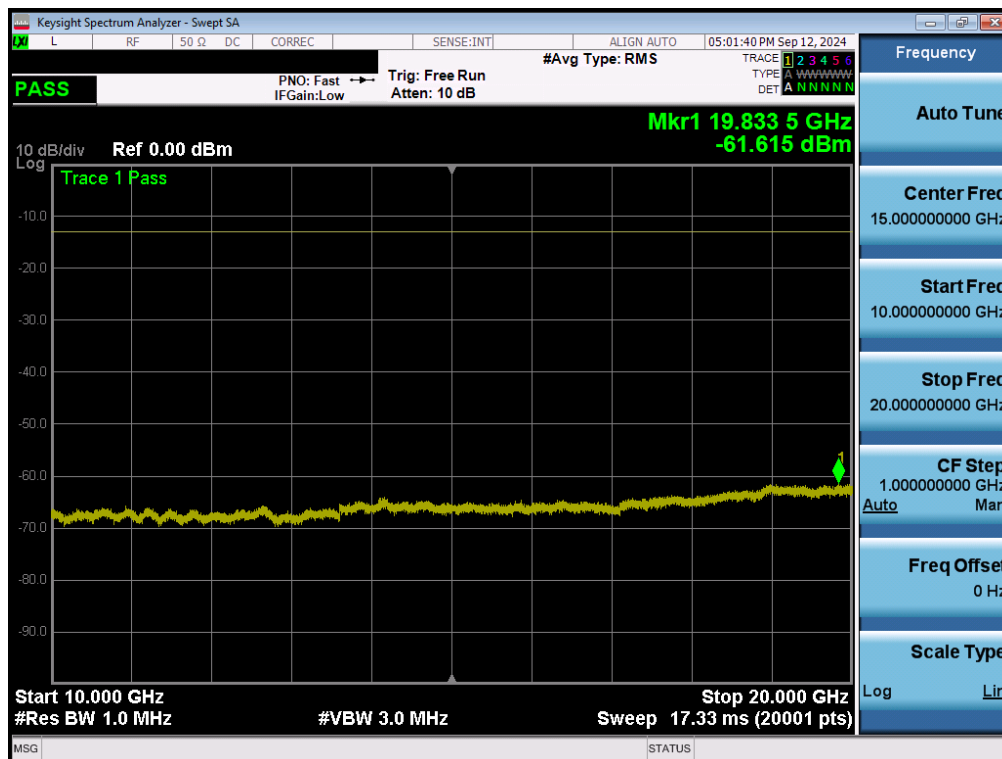


Plot 7-115. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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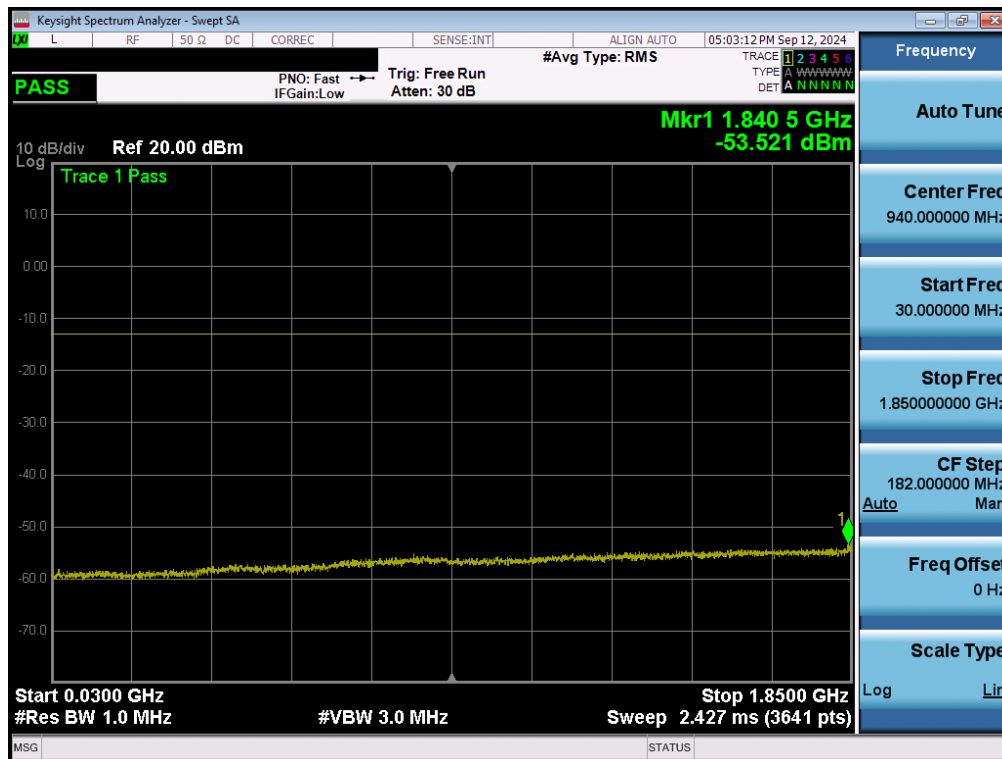


Plot 7-116. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - Ant2)

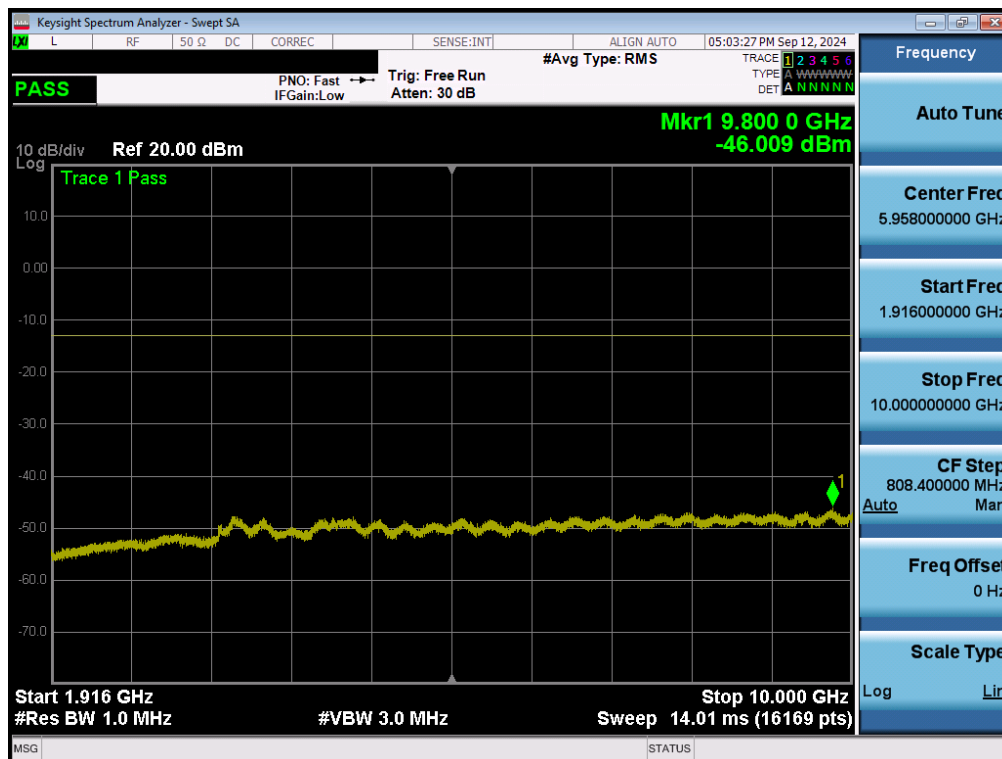


Plot 7-117. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - Mid Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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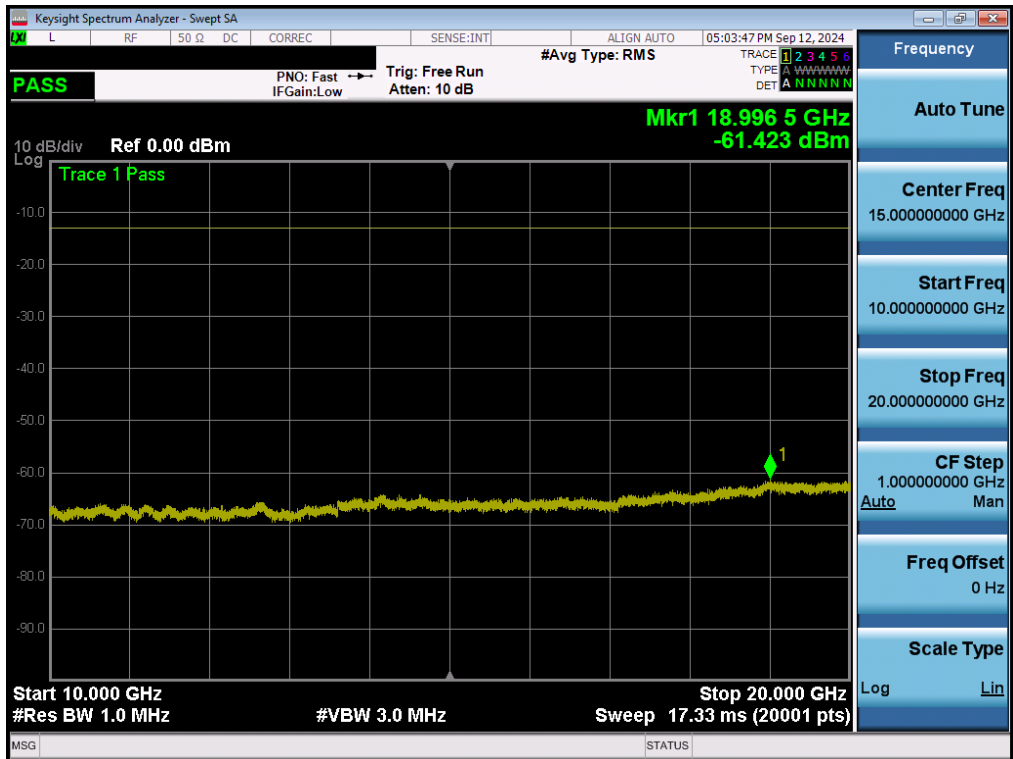


Plot 7-118. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - Ant2)



Plot 7-119. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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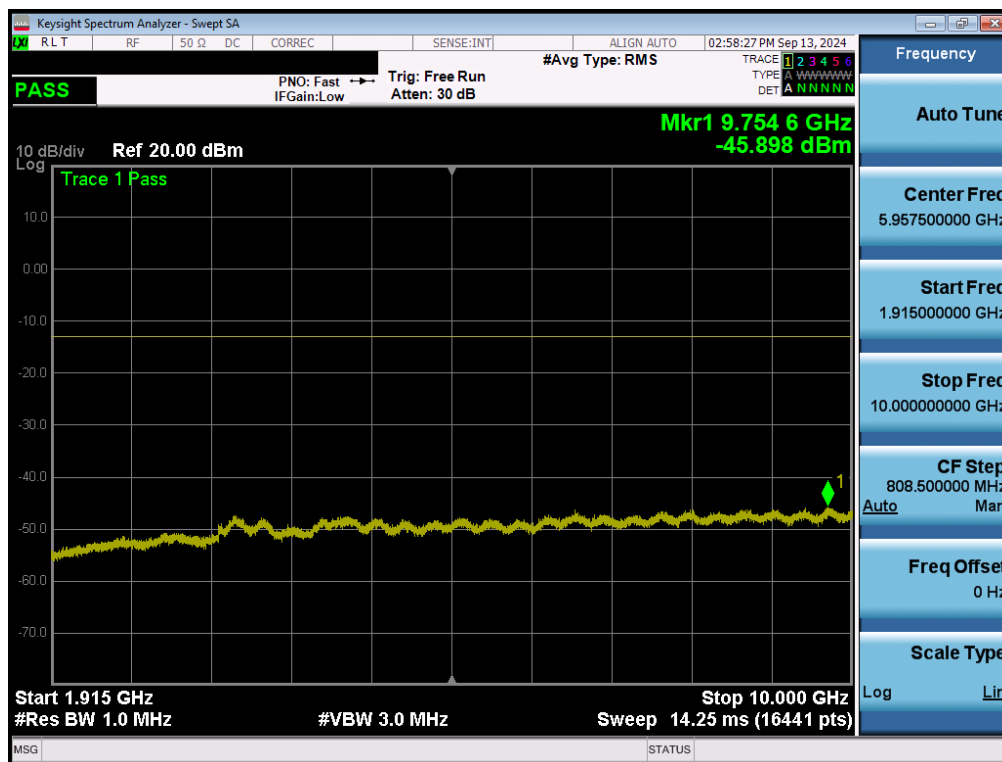
Plot 7-120. Conducted Spurious Plot (LTE Band 25/2 - 20MHz QPSK - 1RB - High Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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NR Band n25/2 – Ant2

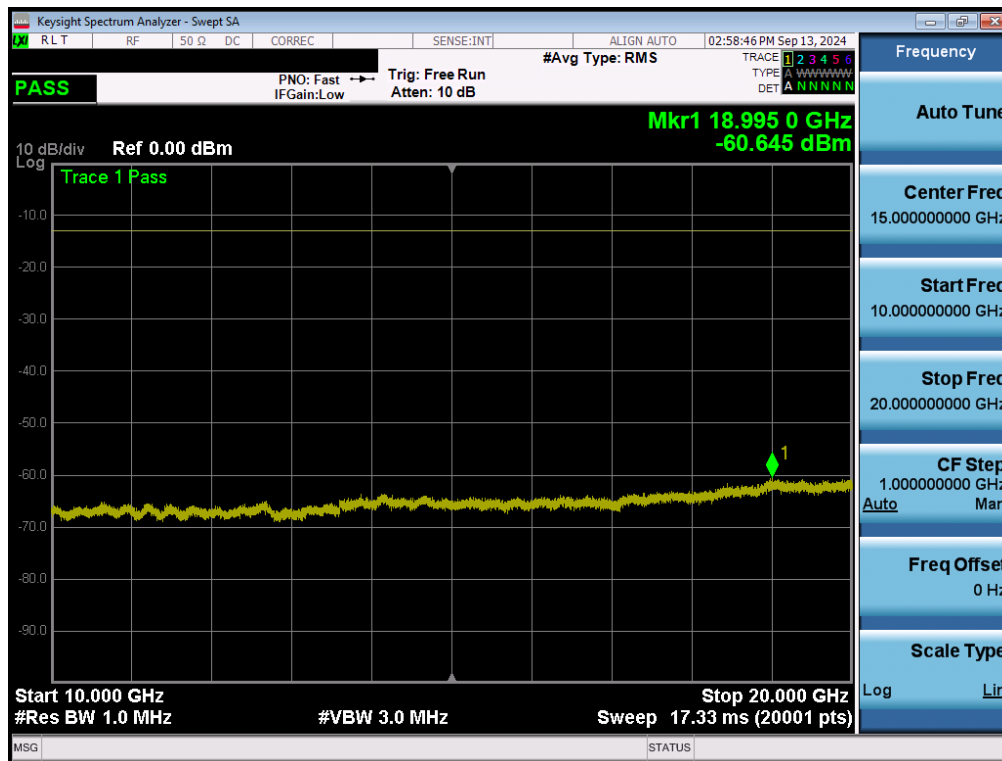


Plot 7-121. Conducted Spurious Plot (NR Band n25/2 -40.0MHz - 1RB - Low Channel - Ant2)



Plot 7-122. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Low Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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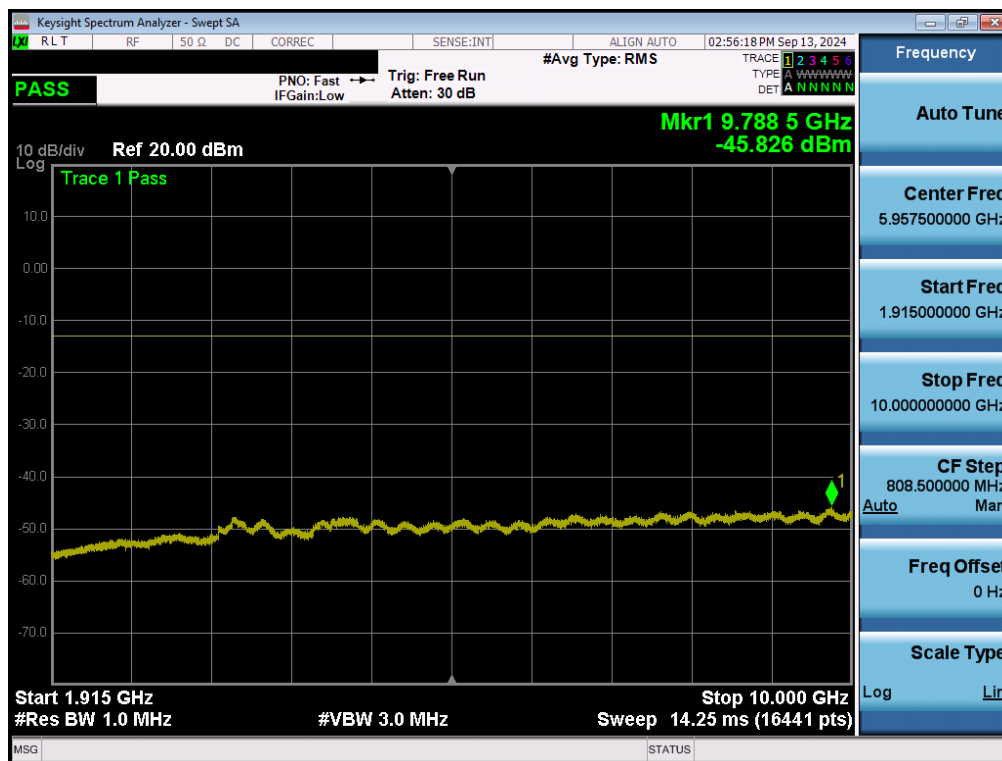


Plot 7-123. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Low Channel - Ant2)

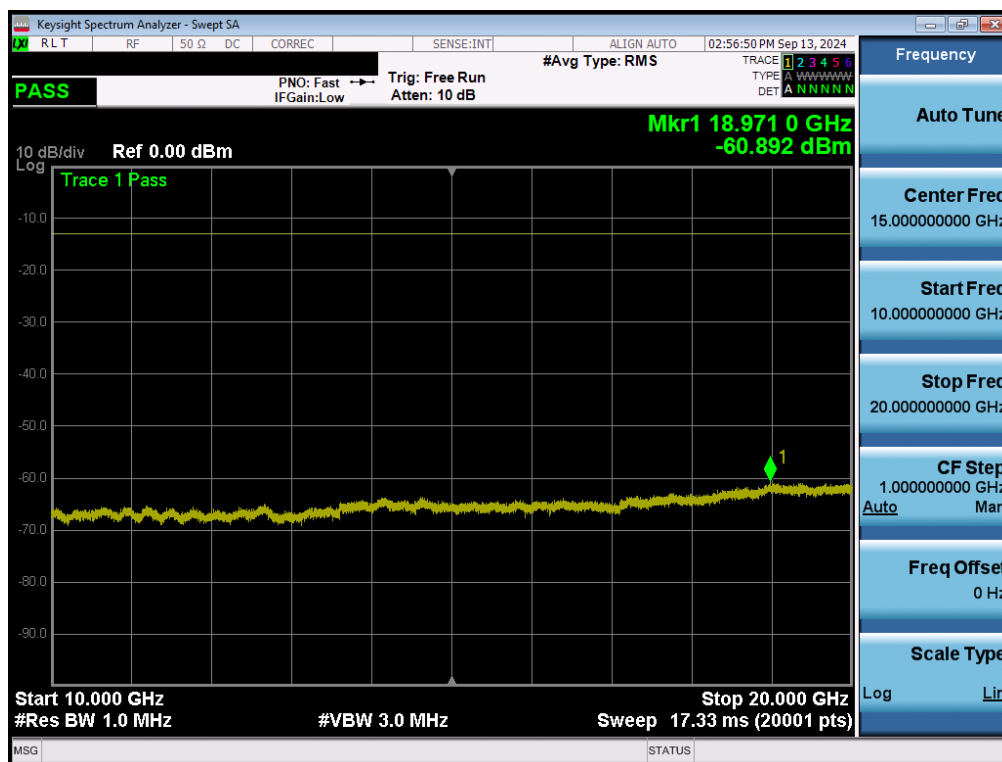


Plot 7-124. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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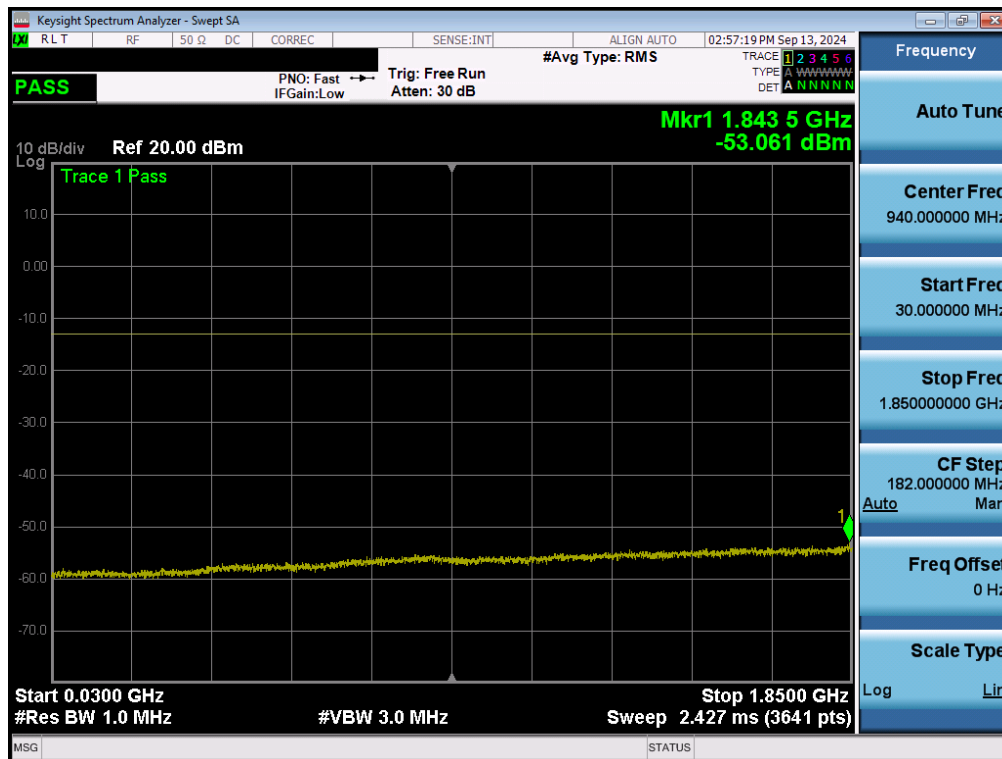


Plot 7-125. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - Ant2)

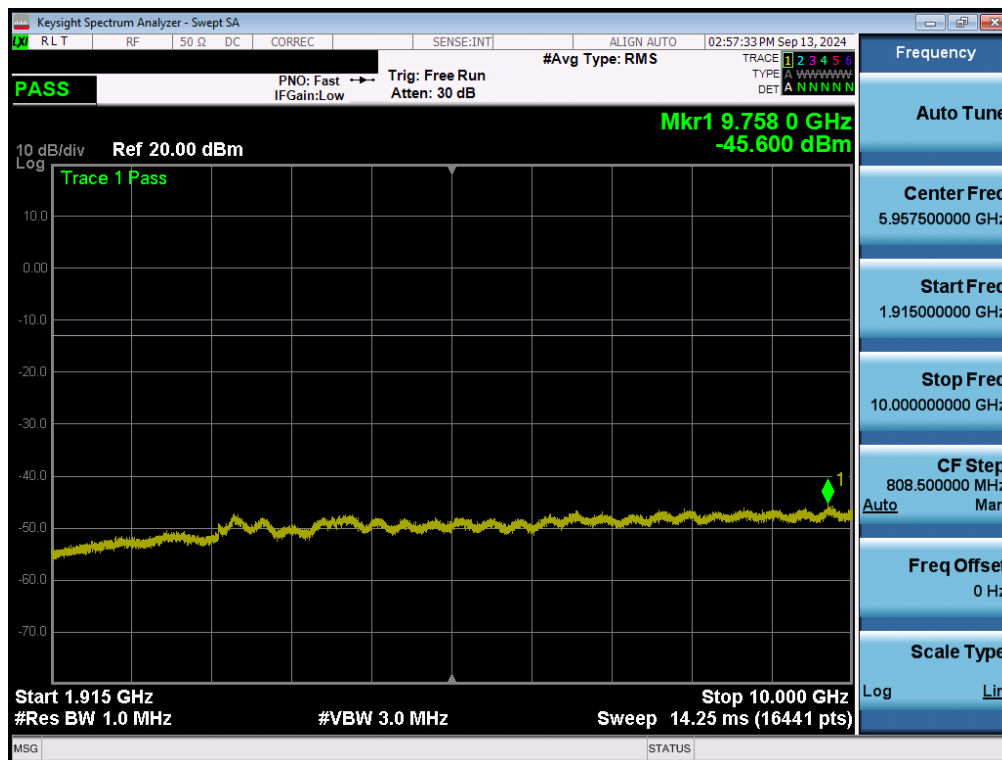


Plot 7-126. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - Mid Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 84 of 174

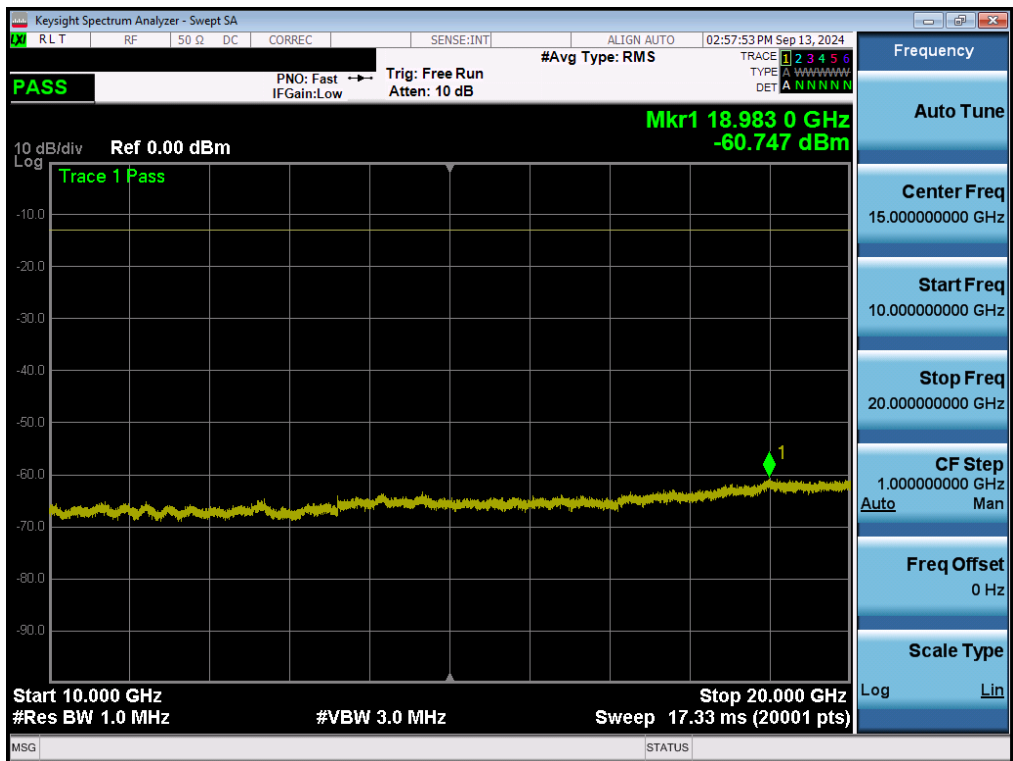


Plot 7-127. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - High Channel - Ant2)



Plot 7-128. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - High Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-129. Conducted Spurious Plot (NR Band n25/2 - 40.0MHz - 1RB - High Channel - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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7.5 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is $43 + 10 \log_{10}(P_{\text{Watts}})$, where P is the transmitter power in Watts.

Test Procedure Used

ANSI C63.26-2015 – Section 5.7.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW $\geq$ 1% of the emission bandwidth
4. VBW $\geq$ 3 x RBW
5. Detector = RMS
6. Number of sweep points $\geq$ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

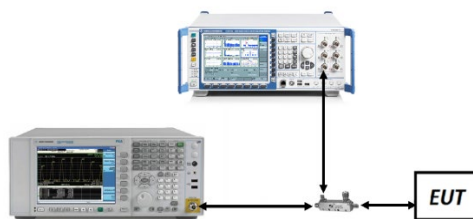


Figure 7-4. Test Instrument & Measurement Setup

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Test Notes

1. Per 24.238(b) and RSS-133(6.5), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

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Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
GSM-PCS	250kHz	Low	Band Edge	-17.85	-13	-4.85
		Low	Extended	-17.85	-13	-4.85
		High	Band Edge	-18.92	-13	-5.92
		High	Extended	-18.92	-13	-5.92
WCDMA-PCS	5MHz	Low	Band Edge	-23.00	-13	-10.00
		High	Band Edge	-22.25	-13	-9.25
LTE-B25-2	20MHz	Low	Band Edge	-28.74	-13	-15.74
		Low	Extended	-24.47	-13	-11.47
		High [B2]	Band Edge	-28.78	-13	-15.78
		High [B25]	Band Edge	-28.65	-13	-15.65
		High [B2]	Extended	-23.52	-13	-10.52
		High [B25]	Extended	-23.66	-13	-10.66
	15MHz	Low	Band Edge	-28.05	-13	-15.05
		Low	Extended	-22.75	-13	-9.75
		High [B2]	Band Edge	-28.48	-13	-15.48
		High [B25]	Band Edge	-28.23	-13	-15.23
		High [B2]	Extended	-21.41	-13	-8.41
		High [B25]	Extended	-22.04	-13	-9.04
	10MHz	Low	Band Edge	-28.63	-13	-15.63
		Low	Extended	-21.31	-13	-8.31
		High [B2]	Band Edge	-27.14	-13	-14.14
		High [B25]	Band Edge	-28.62	-13	-15.62
		High [B2]	Extended	-20.13	-13	-7.13
		High [B25]	Extended	-20.50	-13	-7.50
	5MHz	Low	Band Edge	-24.59	-13	-11.59
		Low	Extended	-20.74	-13	-7.74
		High [B2]	Band Edge	-23.26	-13	-10.26
		High [B25]	Band Edge	-24.59	-13	-11.59
		High [B2]	Extended	-23.51	-13	-10.51
		High [B25]	Extended	-24.00	-13	-11.00
	3MHz	Low	Band Edge	-23.23	-13	-10.23
		Low	Extended	-22.43	-13	-9.43
		High [B2]	Band Edge	-22.19	-13	-9.19
		High [B25]	Band Edge	-23.50	-13	-10.50
		High [B2]	Extended	-23.81	-13	-10.81
		High [B25]	Extended	-23.81	-13	-10.81
	1.4MHz	Low	Band Edge	-22.70	-13	-9.70
		Low	Extended	-28.71	-13	-15.71
		High [B2]	Band Edge	-22.12	-13	-9.12
		High [B25]	Band Edge	-24.55	-13	-11.55
		High [B2]	Extended	-28.33	-13	-15.33
		High [B25]	Extended	-28.96	-13	-15.96

Table 7-8. Conducted Band Edge Test Results – Ant1

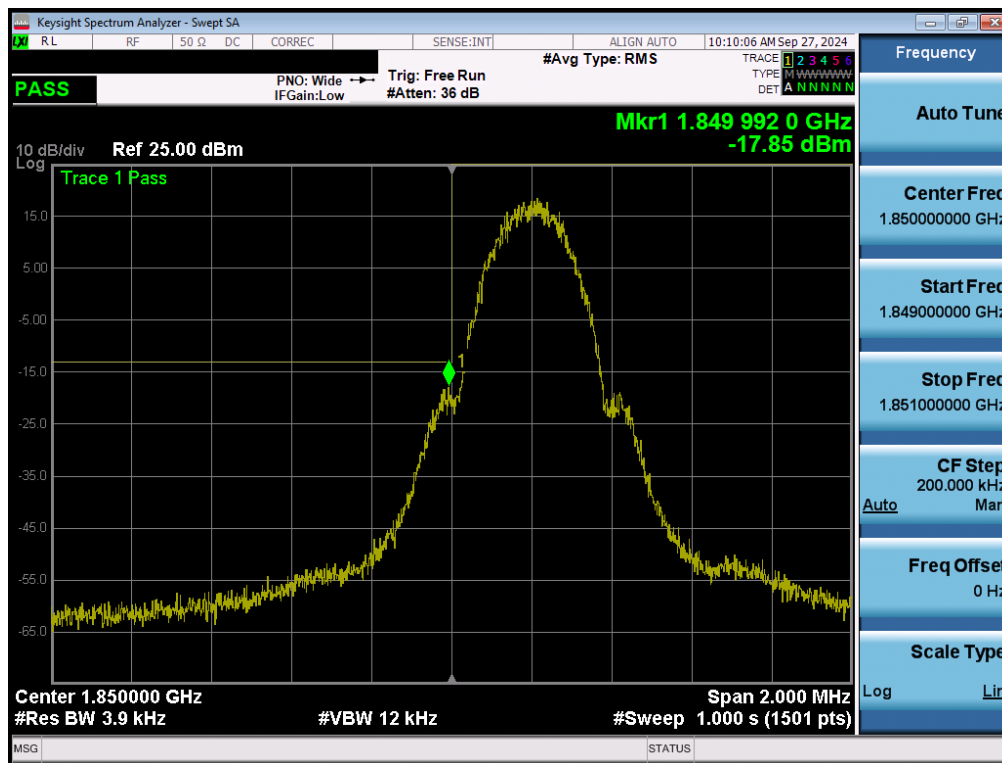
FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 89 of 174

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n25-2	40MHz	Low	Band Edge	-27.03	-13	-14.03
		Low	Extended	-28.68	-13	-15.68
		High [n25]	Band Edge	-27.13	-13	-14.13
		High [n25]	Extended	-28.93	-13	-15.93
	35MHz	Low	Band Edge	-30.07	-13	-17.07
		Low	Extended	-28.75	-13	-15.75
		High [n25]	Band Edge	-29.82	-13	-16.82
		High [n25]	Extended	-29.40	-13	-16.40
	30MHz	Low	Band Edge	-31.22	-13	-18.22
		Low	Extended	-27.63	-13	-14.63
		High [n25]	Band Edge	-31.31	-13	-18.31
		High [n25]	Extended	-28.06	-13	-15.06
	25MHz	Low	Band Edge	-29.01	-13	-16.01
		Low	Extended	-27.18	-13	-14.18
		High [n25]	Band Edge	-32.31	-13	-19.31
		High [n25]	Extended	-27.90	-13	-14.90
	20MHz	Low	Band Edge	-30.59	-13	-17.59
		Low	Extended	-26.84	-13	-13.84
		High [n2]	Band Edge	-31.51	-13	-18.51
		High [n25]	Band Edge	-30.78	-13	-17.78
		High [n2]	Extended	-25.81	-13	-12.81
		High [n25]	Extended	-27.75	-13	-14.74
	15MHz	Low	Band Edge	-32.29	-13	-19.29
		Low	Extended	-22.72	-13	-9.72
		High [n2]	Band Edge	-31.76	-13	-18.76
		High [n25]	Band Edge	-33.24	-13	-20.24
		High [n2]	Extended	-24.94	-13	-11.93
		High [n25]	Extended	-25.51	-13	-12.51
	10MHz	Low	Band Edge	-25.05	-12	-12.93
		Low	Extended	-18.24	-13	-5.35
		High [n2]	Band Edge	-28.68	-3	-25.62
		High [n25]	Band Edge	-25.03	-9	-16.22
		High [n2]	Extended	-19.74	-1	-19.21
		High [n25]	Extended	-21.25	-13	-8.25
	5MHz	Low	Band Edge	-24.03	-13	-11.03
		Low	Extended	-32.81	-13	-19.81
		High [n2]	Band Edge	-23.16	-13	-10.16
		High [n25]	Band Edge	-22.49	-13	-9.49
		High [n2]	Extended	-33.27	-13	-20.27
		High [n25]	Extended	-33.39	-13	-20.39

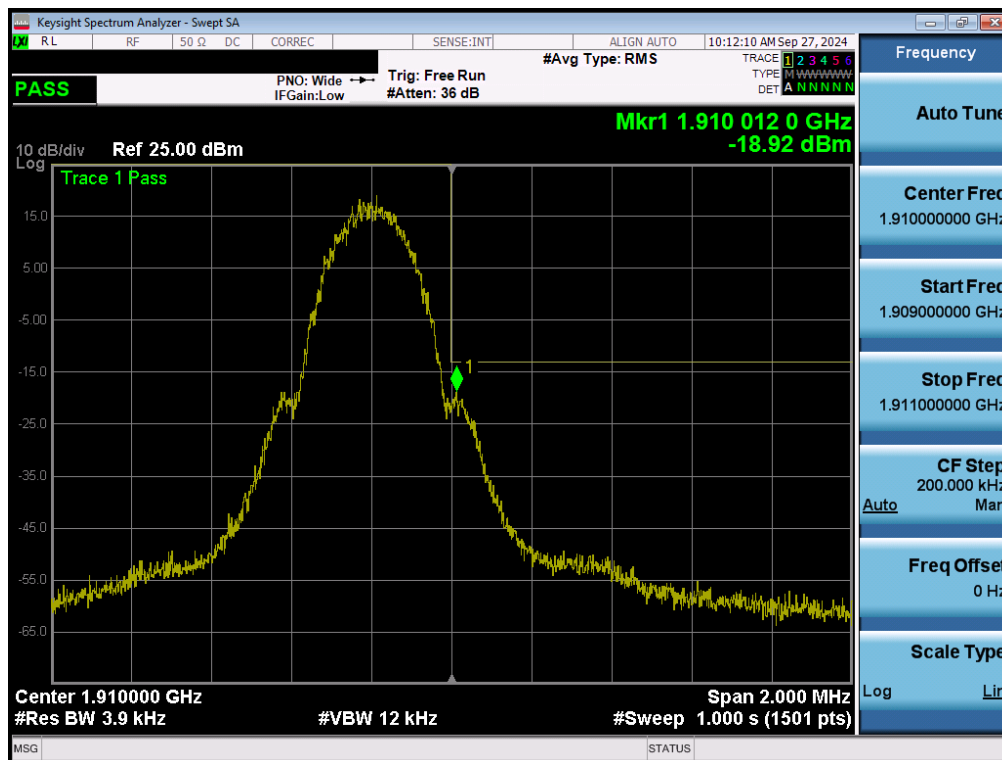
Table 7-9. Conducted Band Edge Test Results – Ant1

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 90 of 174

GSM/GPRS PCS – Ant1



Plot 7-130. Lower Band Edge Plot (GPRS PCS – Ch. 512 - Ant1)



Plot 7-131. Upper Band Edge Plot (GPRS PCS – Ch. 810 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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WCDMA PCS – Ant1



Plot 7-132. Lower Band Edge Plot (WCDMA PCS – Ch. 9262 - Ant1)



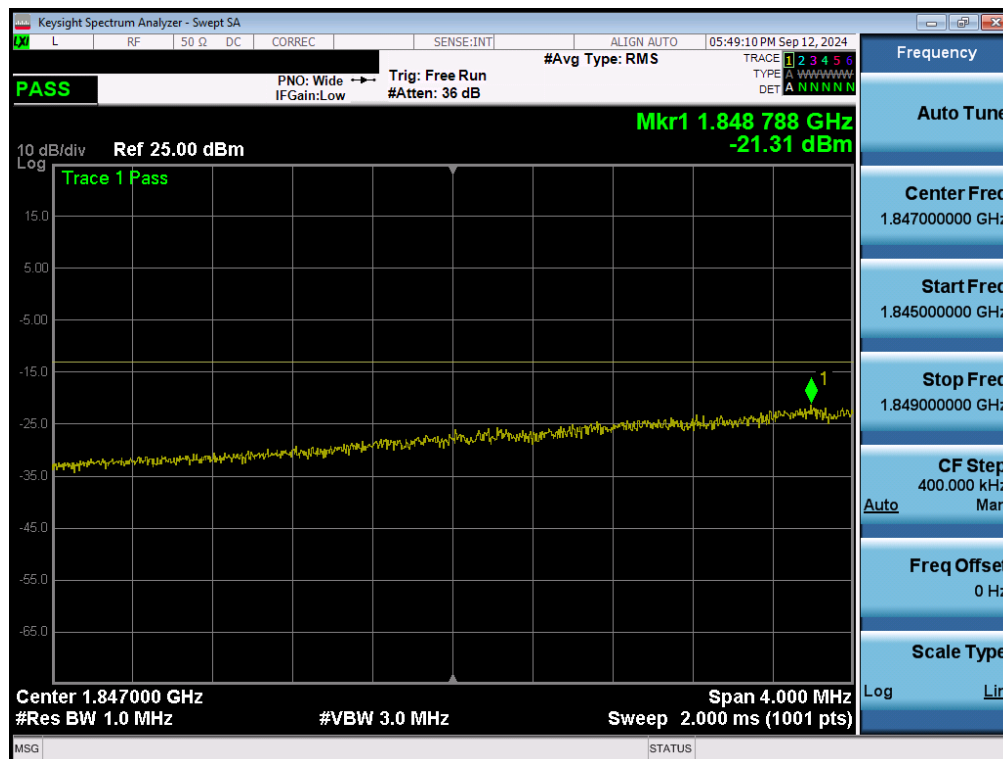
Plot 7-133. Upper Band Edge Plot (WCDMA PCS – Ch. 9538 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 92 of 174

LTE Band 25/2 – Ant1



Plot 7-134. Lower Band Edge Plot (LTE Band 25/2 - 10MHz QPSK – Full RB - Ant1)

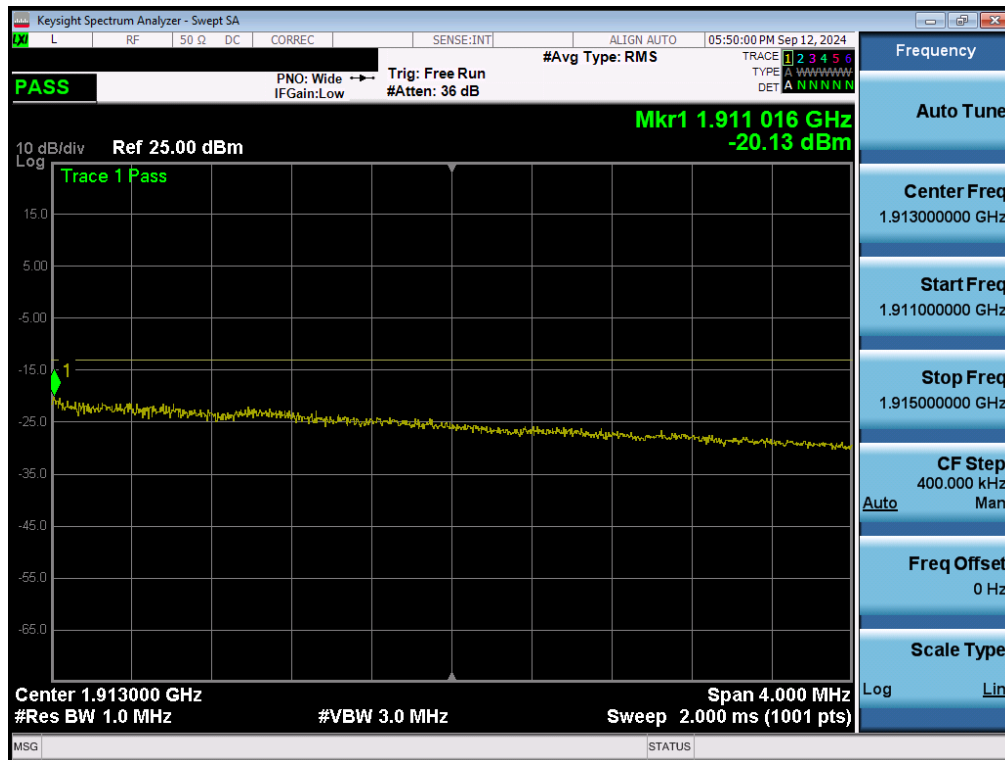


Plot 7-135. Extended Lower Band Edge Plot (LTE Band 25/2 - 10MHz QPSK – Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1-A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 93 of 174



Plot 7-136. Upper Band Edge Plot (LTE Band 2 - 10MHz QPSK – Full RB - Ant1)

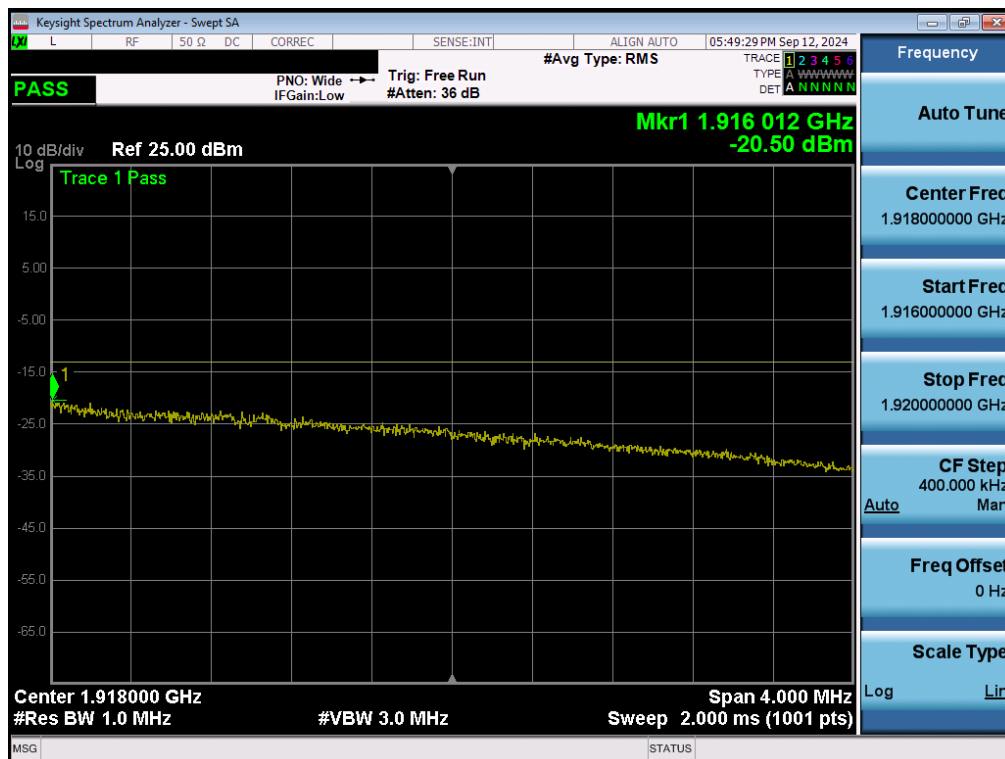


Plot 7-137. Extended Upper Band Edge Plot (LTE Band 2 - 10MHz QPSK – Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 94 of 174



Plot 7-138. Upper Band Edge Plot (LTE Band 25 - 10MHz QPSK - Full RB - Ant1)



Plot 7-139. Extended Upper Band Edge Plot (LTE Band 25 - 10MHz QPSK - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 95 of 174

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
LTE-B25-2	20MHz	Low	Band Edge	-29.04	-13	-16.03
		Low	Extended	-23.69	-13	-10.69
		High [B2]	Band Edge	-29.87	-13	-16.87
		High [B25]	Band Edge	-30.28	-13	-17.28
		High [B2]	Extended	-25.21	-13	-12.21
		High [B25]	Extended	-26.19	-13	-13.18
	15MHz	Low	Band Edge	-29.70	-13	-16.70
		Low	Extended	-23.39	-13	-10.39
		High [B2]	Band Edge	-30.73	-13	-17.73
		High [B25]	Band Edge	-28.63	-13	-15.63
		High [B2]	Extended	-24.07	-13	-11.07
		High [B25]	Extended	-24.48	-13	-11.48
	10MHz	Low	Band Edge	-27.52	-13	-14.52
		Low	Extended	-21.98	-13	-8.98
		High [B2]	Band Edge	-27.89	-13	-14.88
		High [B25]	Band Edge	-27.43	-13	-14.43
		High [B2]	Extended	-21.67	-13	-8.66
		High [B25]	Extended	-21.54	-13	-8.54
	5MHz	Low	Band Edge	-26.28	-13	-13.28
		Low	Extended	-25.95	-13	-12.95
		High [B2]	Band Edge	-25.97	-13	-12.97
		High [B25]	Band Edge	-26.83	-13	-13.45
		High [B2]	Extended	-26.26	-13	-13.26
		High [B25]	Extended	-16.49	-5	-11.87
	3MHz	Low	Band Edge	-24.24	-13	-11.24
		Low	Extended	-26.01	-13	-13.01
		High [B2]	Band Edge	-24.70	-13	-11.70
		High [B25]	Band Edge	-25.32	-13	-12.32
		High [B2]	Extended	-27.04	-13	-14.04
		High [B25]	Extended	-22.03	-13	-9.03
	1.4MHz	Low	Band Edge	-24.34	-13	-11.34
		Low	Extended	-36.48	-13	-23.48
		High [B2]	Band Edge	-25.62	-13	-12.62
		High [B25]	Band Edge	-23.88	-13	-10.87
		High [B2]	Extended	-35.31	-13	-22.31
		High [B25]	Extended	-33.01	-13	-20.01

Table 7-10. Conducted Band Edge Test Results – Ant2

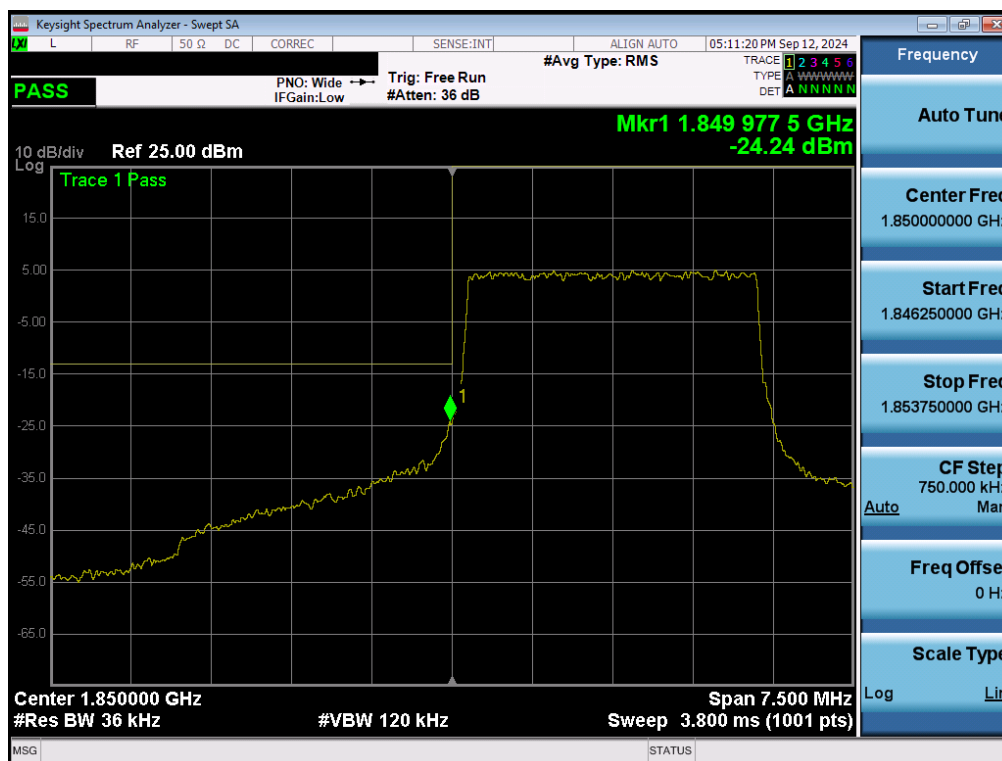
FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 96 of 174

Mode	Bandwidth	Channel	Test Case	Level [dBm]	Limit [dBm]	Margin [dB]
NR-n25-2	40MHz	Low	Band Edge	-26.75	-13	-13.75
		Low	Extended	-28.73	-13	-15.73
		High [n25]	Band Edge	-26.32	-13	-13.32
		High [n25]	Extended	-30.15	-13	-17.15
	35MHz	Low	Band Edge	-31.06	-13	-18.06
		Low	Extended	-28.57	-13	-15.57
		High [n25]	Band Edge	-31.87	-13	-18.87
		High [n25]	Extended	-29.86	-13	-16.86
	30MHz	Low	Band Edge	-32.02	-13	-19.02
		Low	Extended	-27.16	-13	-14.16
		High [n25]	Band Edge	-32.81	-13	-19.81
		High [n25]	Extended	-28.56	-13	-15.56
	25MHz	Low	Band Edge	-30.46	-13	-17.46
		Low	Extended	-25.85	-13	-12.85
		High [n25]	Band Edge	-31.40	-13	-18.40
		High [n25]	Extended	-27.00	-13	-14.00
	20MHz	Low	Band Edge	-30.64	-13	-17.64
		Low	Extended	-24.07	-13	-11.07
		High [n2]	Band Edge	-31.24	-13	-18.24
		High [n25]	Band Edge	-31.44	-13	-18.44
		High [n2]	Extended	-26.29	-13	-13.29
		High [n25]	Extended	-26.57	-13	-13.57
	15MHz	Low	Band Edge	-27.02	-13	-14.02
		Low	Extended	-22.49	-13	-9.49
		High [n2]	Band Edge	-31.87	-13	-18.87
		High [n25]	Band Edge	-30.09	-13	-17.09
		High [n2]	Extended	-24.01	-13	-11.01
		High [n25]	Extended	-24.25	-13	-11.25
	10MHz	Low	Band Edge	-25.94	-13	-12.94
		Low	Extended	-18.02	-13	-5.02
		High [n2]	Band Edge	-26.15	-13	-13.15
		High [n25]	Band Edge	-26.65	-13	-13.65
		High [n2]	Extended	-18.60	-13	-5.60
		High [n25]	Extended	-24.94	-13	-11.94
	5MHz	Low	Band Edge	-24.30	-13	-11.30
		Low	Extended	-25.36	-13	-12.36
		High [n2]	Band Edge	-23.75	-13	-10.75
		High [n25]	Band Edge	-22.86	-13	-9.86
		High [n2]	Extended	-26.28	-13	-13.28
		High [n25]	Extended	-24.19	-13	-11.19

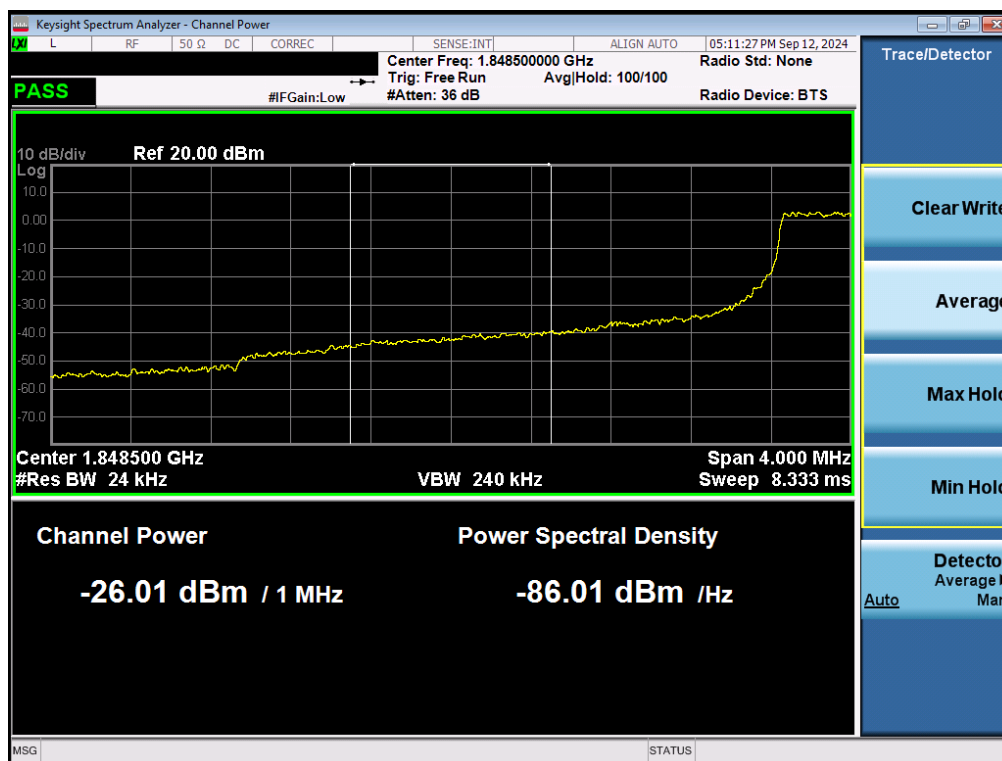
Table 7-11. Conducted Band Edge Test Results – Ant2

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 97 of 174

LTE Band 25/2 – Ant2



Plot 7-140. Lower Band Edge Plot (LTE Band 25/2 - 3MHz QPSK – Full RB - Ant2)

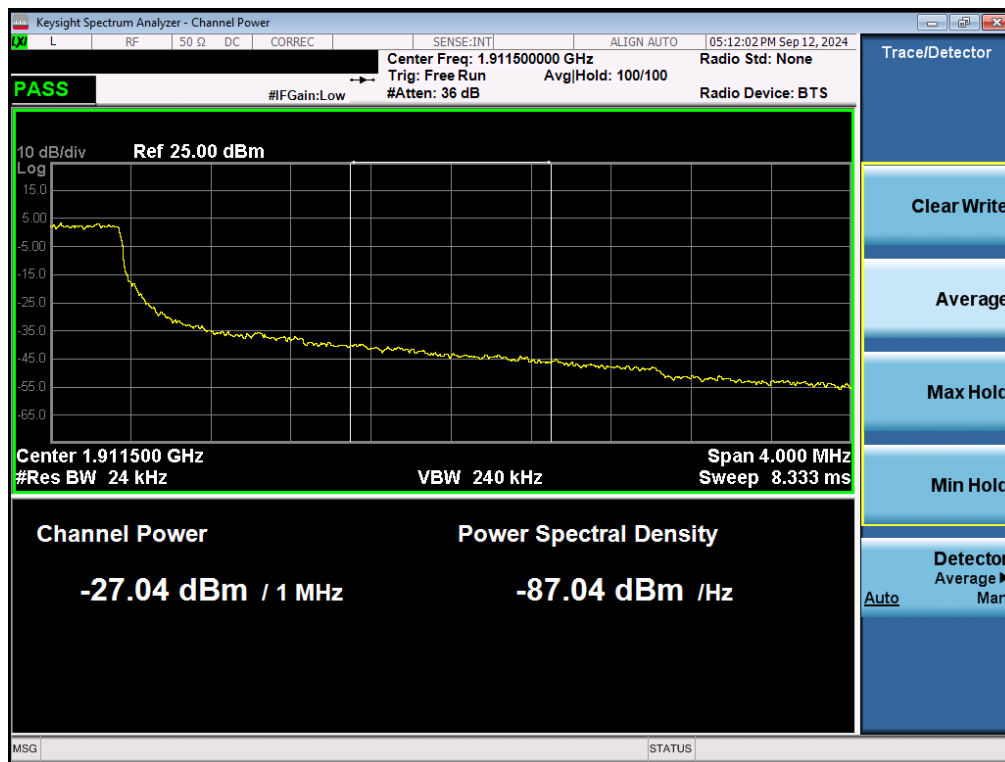


Plot 7-141. Extended Lower Band Edge Plot (LTE Band 25/2 - 3MHz QPSK – Full RB - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-142. Upper Band Edge Plot (LTE Band 2 - 3MHz QPSK – Full RB - Ant2)

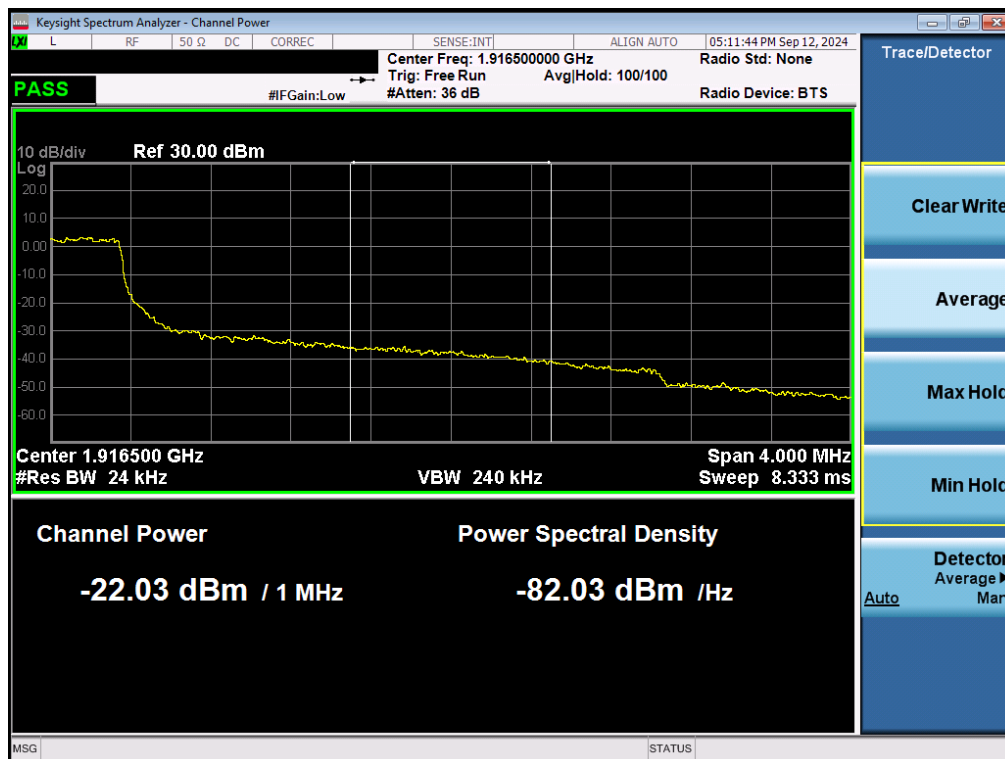


Plot 7-143. Extended Upper Band Edge Plot (LTE Band 2 - 3MHz QPSK – Full RB - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-144. Upper Band Edge Plot (LTE Band 25 - 3MHz QPSK – Full RB - Ant2)



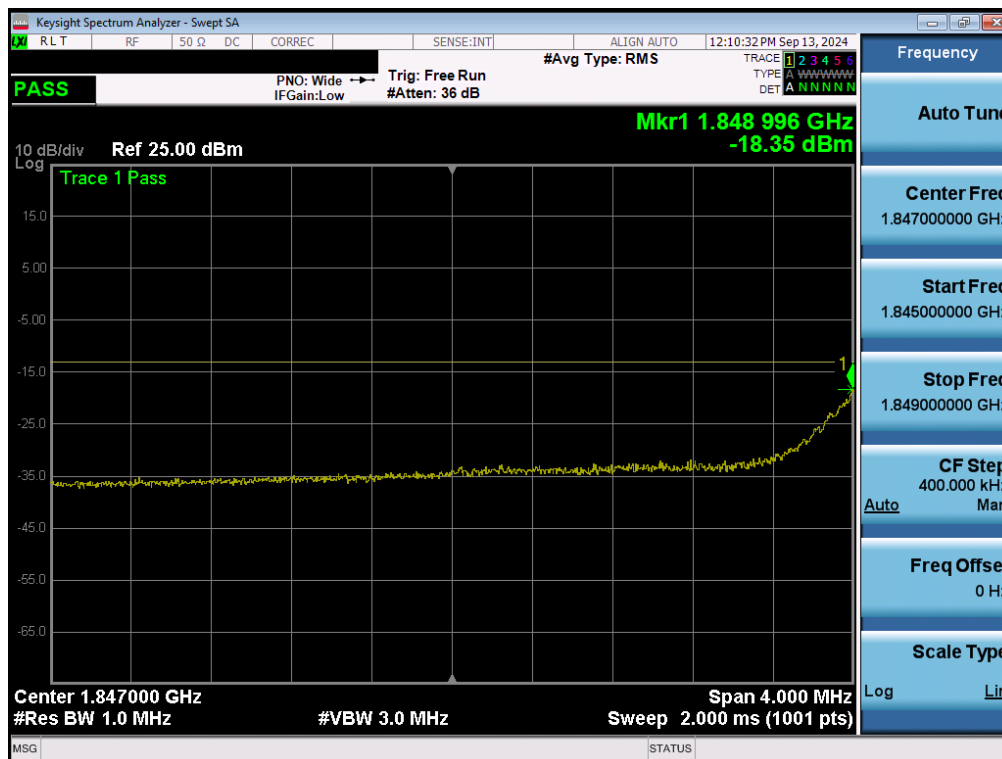
Plot 7-145. Extended Upper Band Edge Plot (LTE Band 25 - 3MHz QPSK – Full RB - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 100 of 174

NR Band n25/2 – Ant1

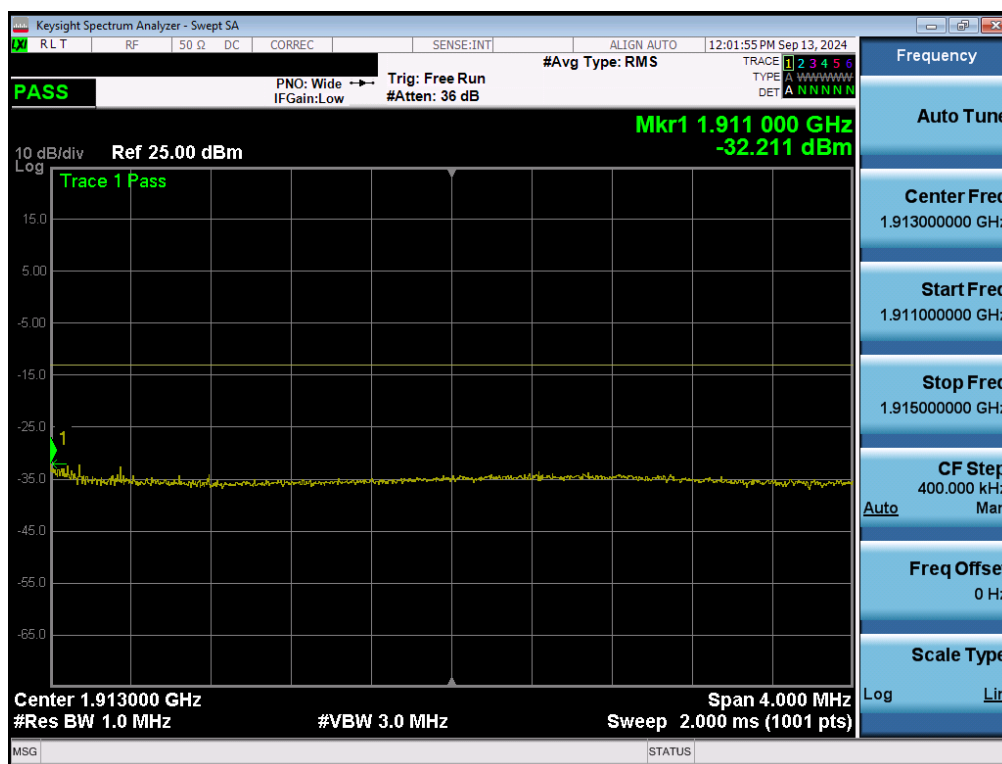


Plot 7-146. Lower Band Edge Plot (NR Band n25/2 - 10MHz QPSK – Full RB - Ant1)



Plot 7-147. Extended Lower Band Edge Plot (NR Band n25/2 - 10MHz QPSK – Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 101 of 174



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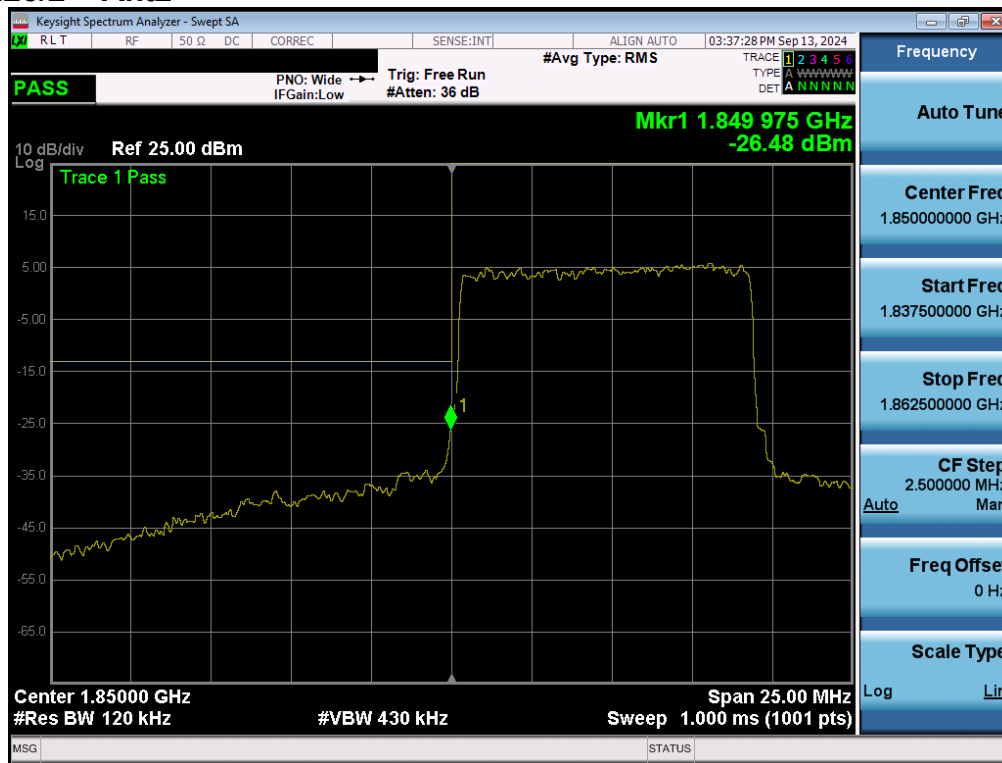
Plot 7-150. Upper Band Edge Plot (NR Band n25 - 10MHz QPSK – Full RB - Ant1)



Plot 7-151. Extended Upper Band Edge Plot (NR Band n25 - 10MHz QPSK – Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 103 of 174

NR Band n25/2 – Ant2



Plot 7-152. Lower Band Edge Plot (NR Band n25/2 - 10MHz QPSK – Full RB - Ant2)

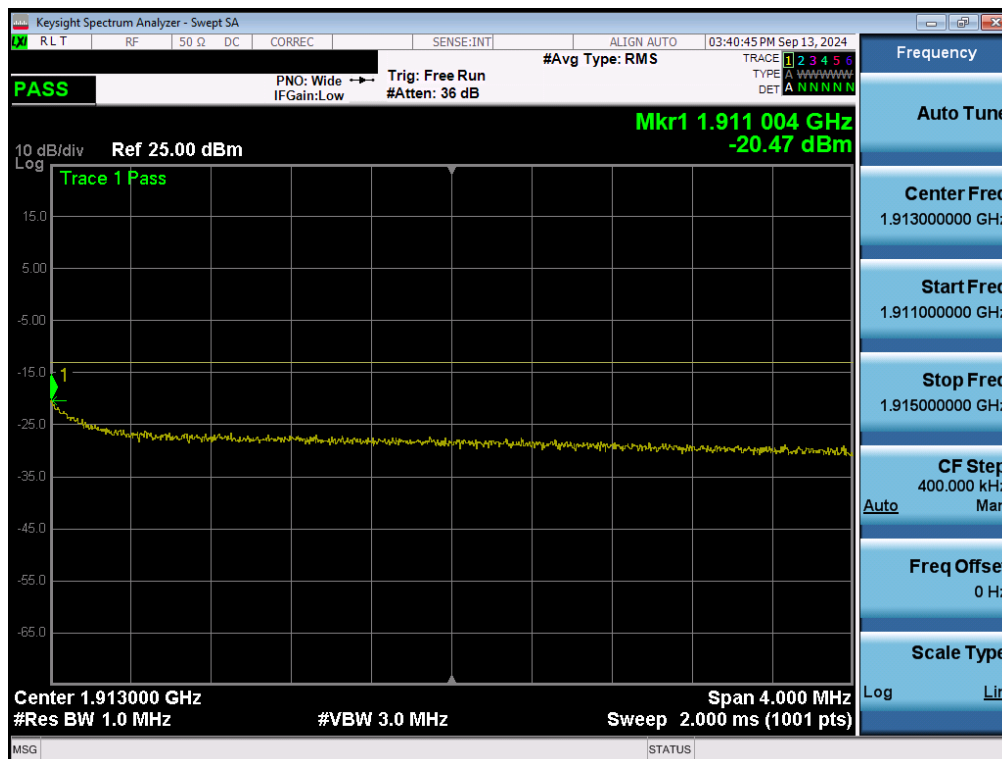


Plot 7-153. Extended Lower Band Edge Plot (NR Band n25/2 - 10MHz QPSK – Full RB - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 104 of 174



Plot 7-154. Upper Band Edge Plot (NR Band n2 - 10MHz QPSK – Full RB - Ant2)



Plot 7-155. Extended Upper Band Edge Plot (NR Band n2 - 10MHz QPSK – Full RB - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 105 of 174



Plot 7-156. Upper Band Edge Plot (NR Band n25 - 10MHz QPSK – Full RB - Ant2)



Plot 7-157. Extended Upper Band Edge Plot (NR Band n25 - 10MHz QPSK – Full RB - Ant2)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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7.6 Peak-Average Ratio

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

Test Procedure Used

ANSI C63.26-2015 – Section 5.2.3.4

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW $\geq$ OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

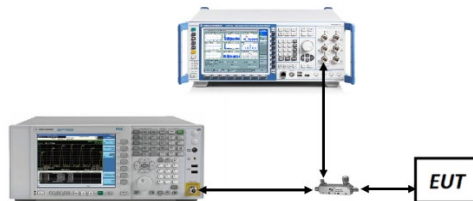


Figure 7-5. Test Instrument & Measurement Setup

Test Notes

For the QAM modulations, 256QAM was found to have the worst-case peak-to-average ratio so it is the only QAM measurement included in this section.

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
GSM-PCS	N/A	GMSK	26.64	2.75	13	-10.25
GSM-PCS EDGE		8-PSK	25.00	4.98	13	-8.02
WCDMA-PCS		Spread Spectrum	23.18	2.99	13	-10.01
LTE-B25-2	20MHz	QPSK	22.61	4.57	13	-8.43
		256QAM	18.60	6.65	13	-6.35
	15MHz	QPSK	22.63	4.53	13	-8.47
		256QAM	18.61	6.68	13	-6.32
	10MHz	QPSK	22.63	4.59	13	-8.41
		256QAM	18.63	6.68	13	-6.32
	5MHz	QPSK	22.64	4.49	13	-8.51
		256QAM	18.65	6.70	13	-6.30
	3MHz	QPSK	22.65	4.58	13	-8.42
		256QAM	18.65	6.76	13	-6.24
	1.4MHz	QPSK	22.65	4.51	13	-8.49
		256QAM	18.70	6.76	13	-6.24

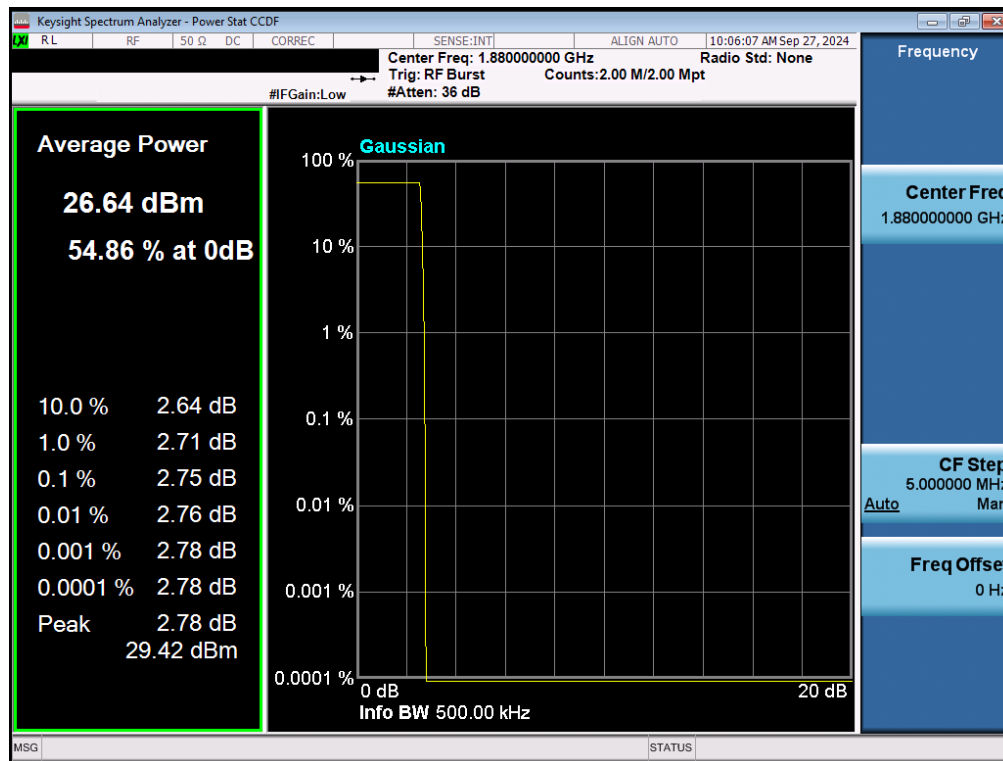
Table 7-12. PAR Test Results – Ant1

Mode	Bandwidth	Modulation	Average Power [dBm]	PAR at 0.1% [dB]	PAR Limit [dB]	Margin [dB]
NR-n25-2	40MHz	BPSK	23.41	4.03	13	-8.97
		QPSK	20.87	6.61	13	-6.39
		256QAM	17.29	8.42	13	-4.58
	35MHz	BPSK	23.35	3.93	13	-9.07
		QPSK	20.77	6.65	13	-6.35
		256QAM	17.27	8.33	13	-4.67
	30MHz	BPSK	23.29	3.86	13	-9.14
		QPSK	20.76	6.56	13	-6.44
		256QAM	17.30	8.40	13	-4.60
	25MHz	BPSK	23.42	4.07	13	-8.93
		QPSK	20.83	6.74	13	-6.26
		256QAM	17.38	8.58	13	-4.42
	20MHz	BPSK	23.37	3.80	13	-9.20
		QPSK	20.93	6.50	13	-6.50
		256QAM	17.32	8.38	13	-4.62
	15MHz	BPSK	23.34	3.80	13	-9.20
		QPSK	20.78	6.55	13	-6.45
		256QAM	17.27	8.39	13	-4.61
	10MHz	BPSK	23.37	3.80	13	-9.20
		QPSK	20.87	6.63	13	-6.37
		256QAM	17.27	8.60	13	-4.40
	5MHz	BPSK	23.44	3.87	13	-9.13
		QPSK	20.84	6.65	13	-6.35
		256QAM	17.37	8.48	13	-4.52

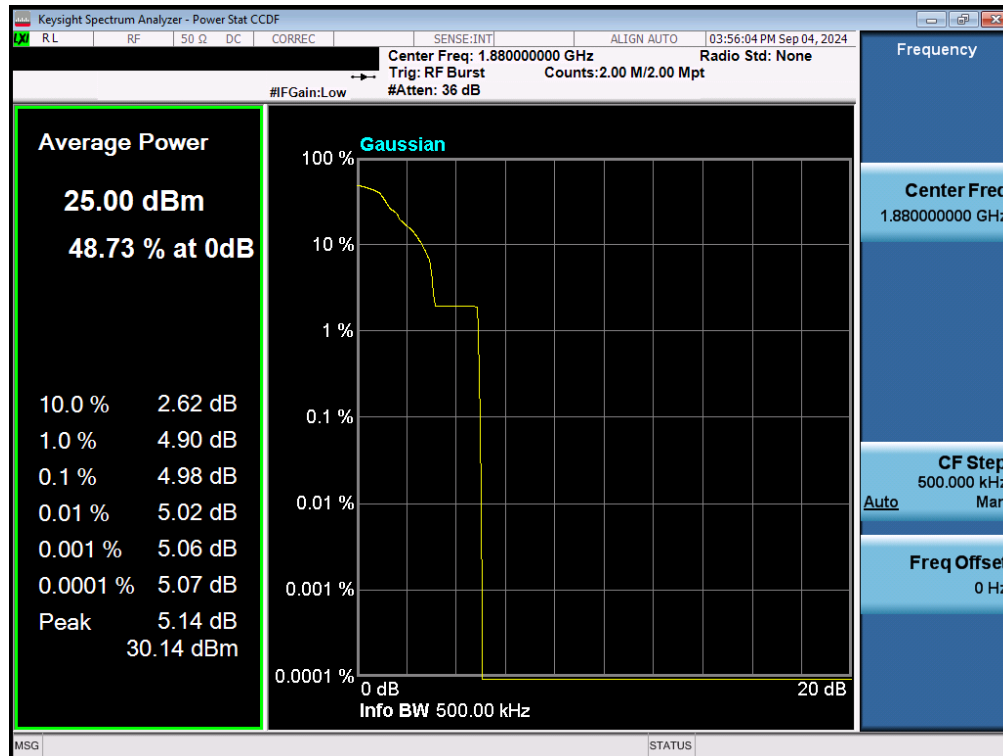
Table 7-13. PAR Test Results – Ant1

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GSM/GPRS PCS – Ant1



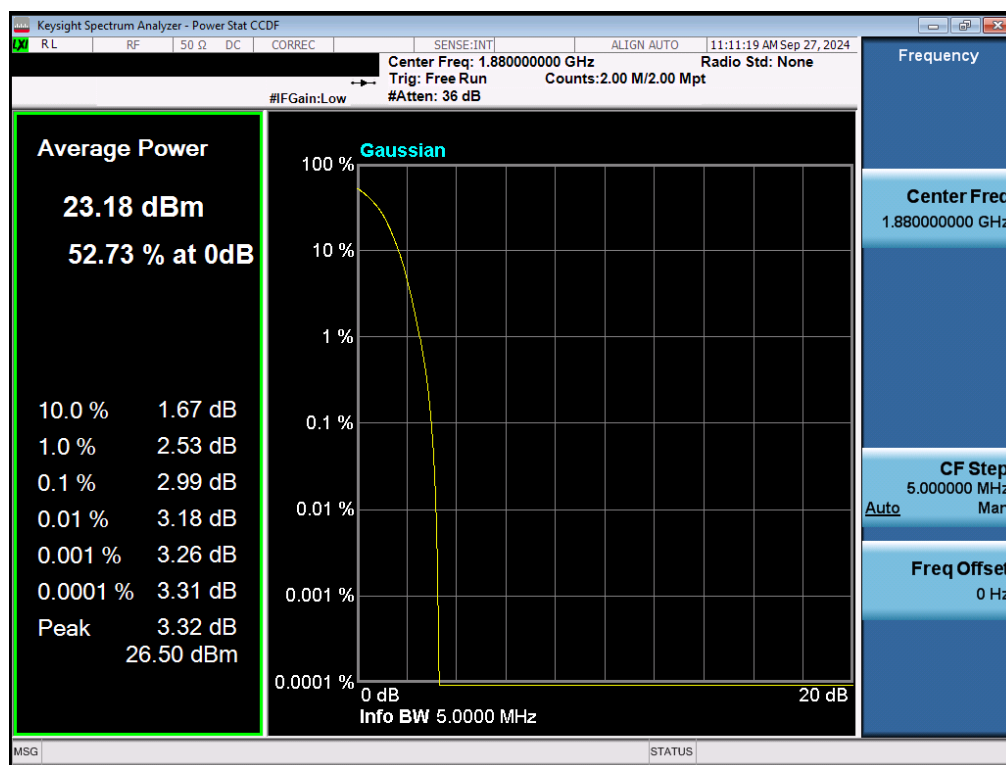
Plot 7-158. PAR Plot (GPRS, Ch. 661 - Ant1)



Plot 7-159. PAR Plot (EDGE, Ch. 661 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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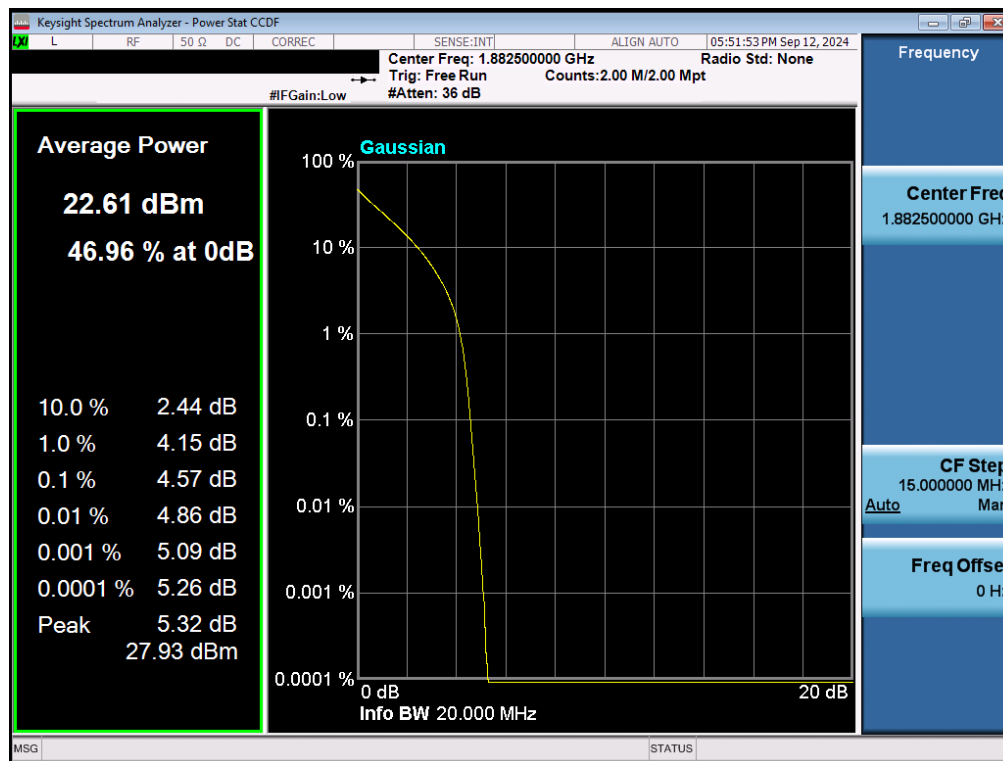
WCDMA PCS – Ant1



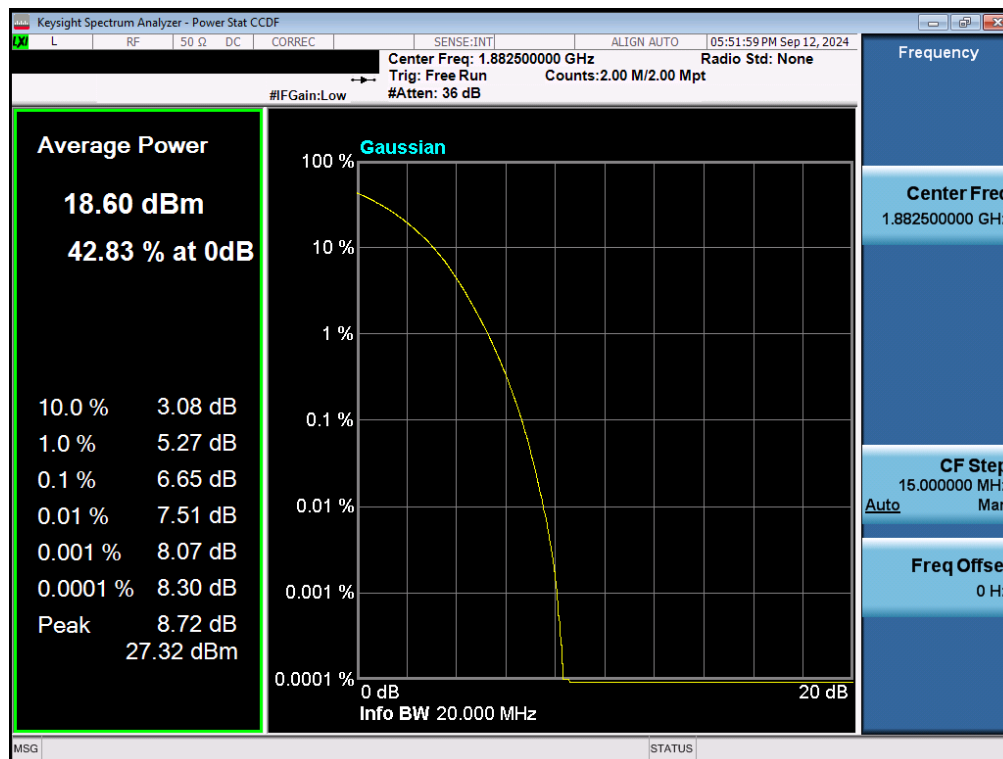
Plot 7-160. PAR Plot (WCDMA, Ch. 9400 - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 25/2 – Ant1

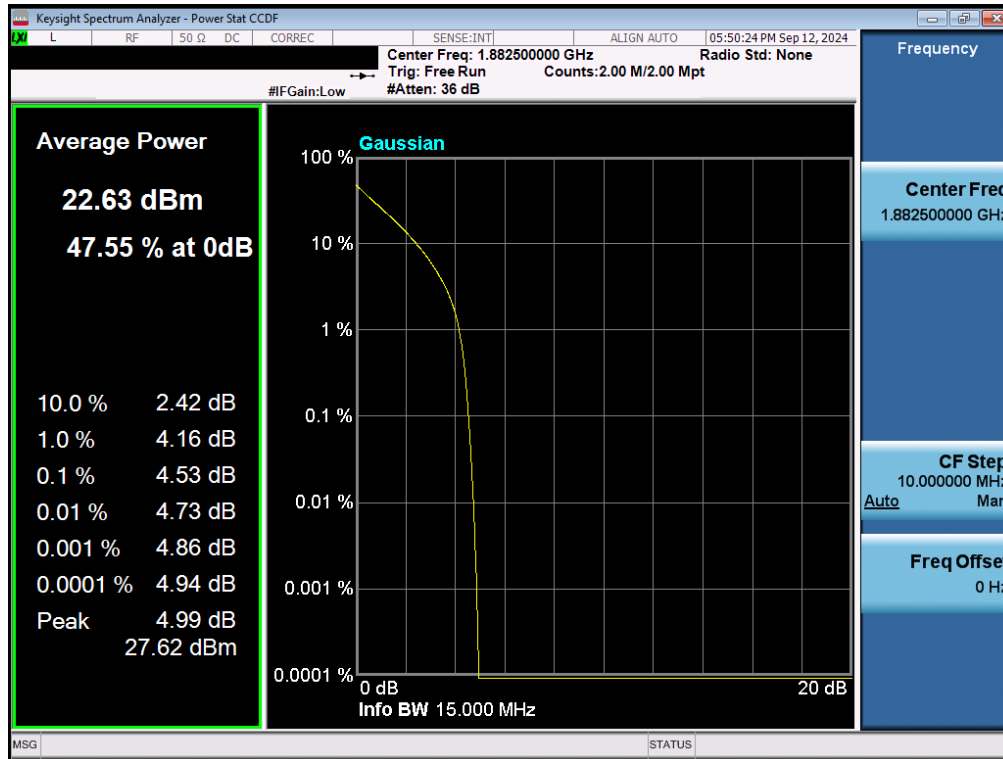


Plot 7-161. PAR Plot (LTE Band 25/2 - 20MHz QPSK - Full RB - Ant1)

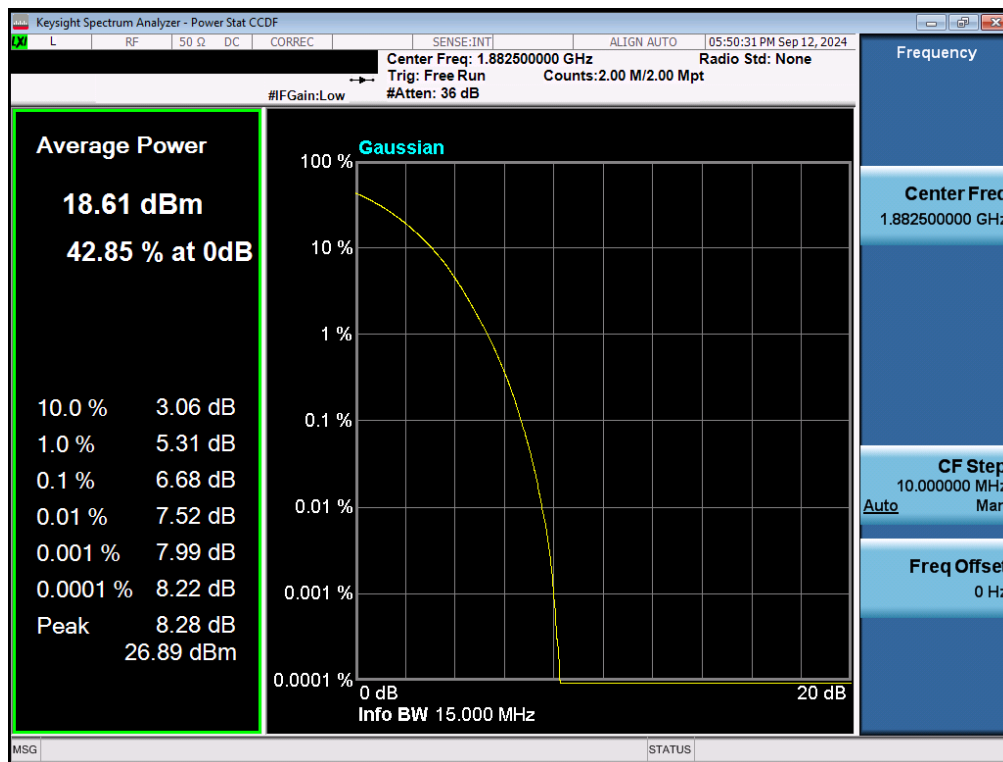


Plot 7-162. PAR Plot (LTE Band 25/2 - 20MHz 256-QAM - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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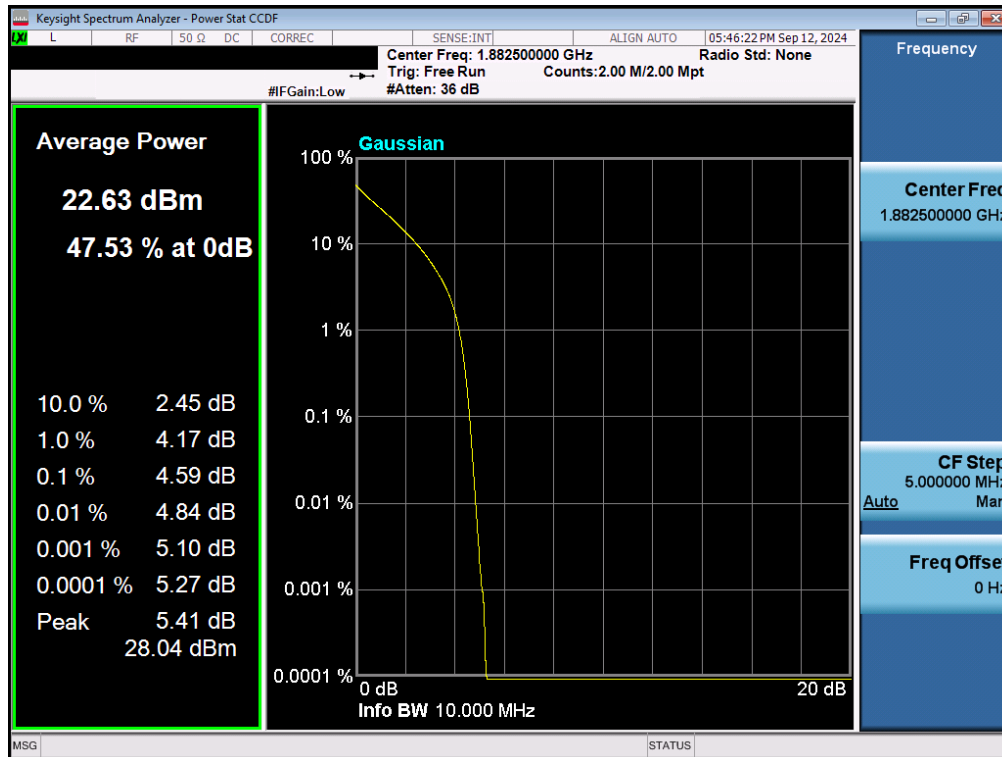


Plot 7-163. PAR Plot (LTE Band 25/2 - 15MHz QPSK - Full RB - Ant1)

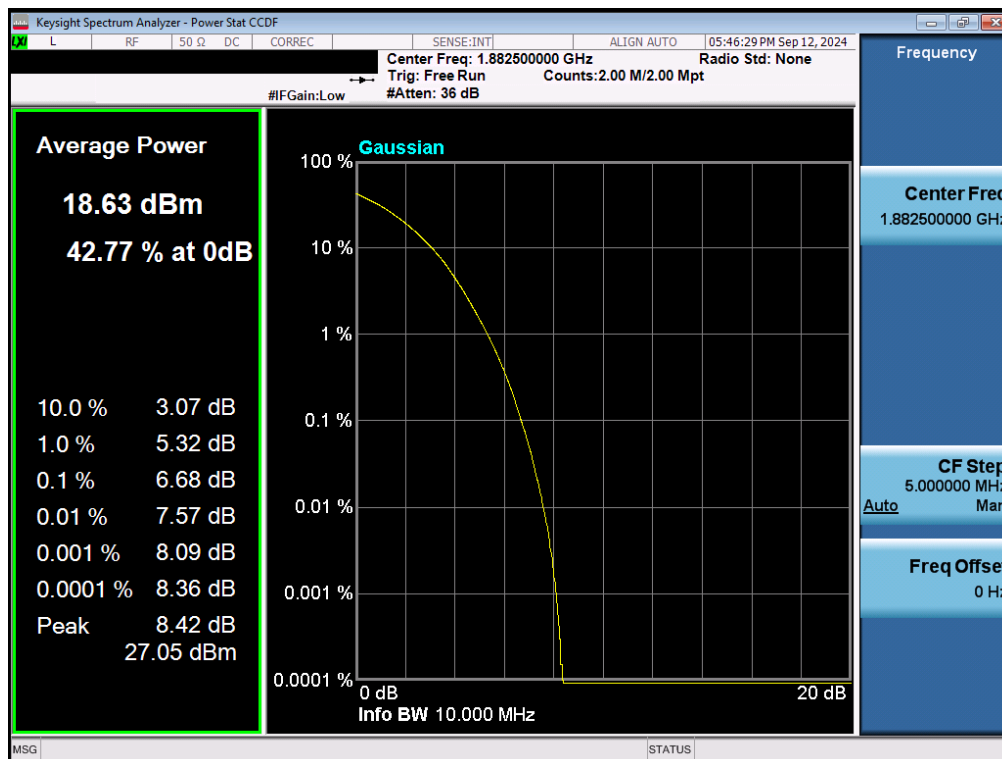


Plot 7-164. PAR Plot (LTE Band 25/2 - 15MHz 256-QAM - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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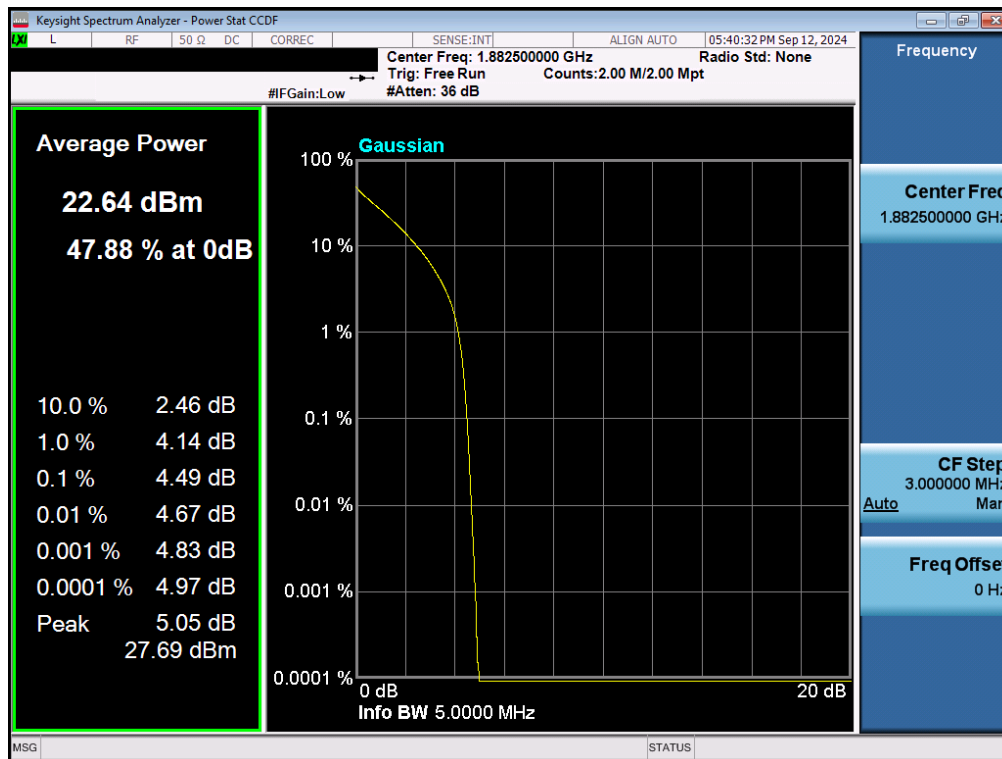


Plot 7-165. PAR Plot (LTE Band 25/2 - 10MHz QPSK - Full RB - Ant1)

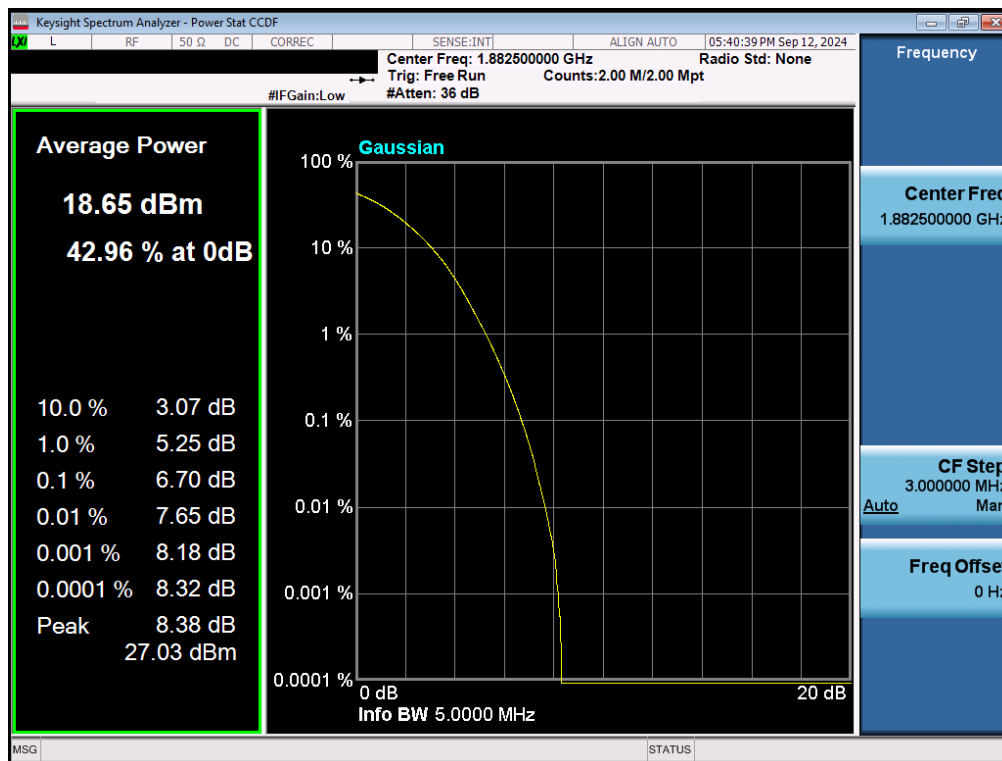


Plot 7-166. PAR Plot (LTE Band 25/2 - 10MHz 256-QAM - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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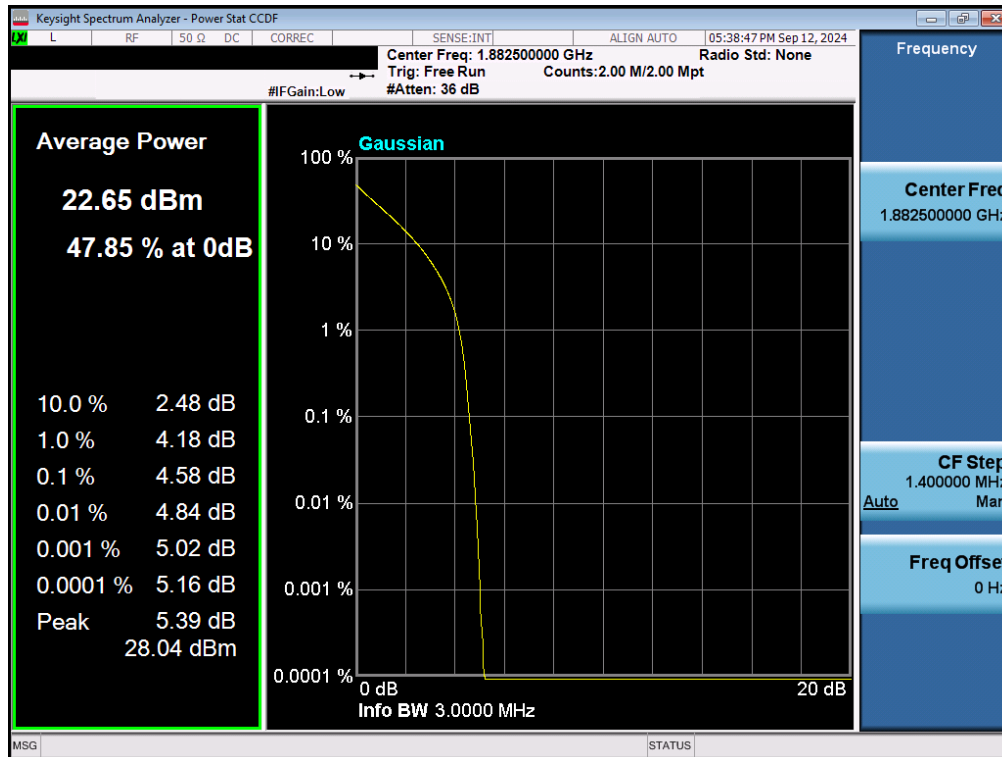


Plot 7-167. PAR Plot (LTE Band 25/2 - 5MHz QPSK - Full RB - Ant1)

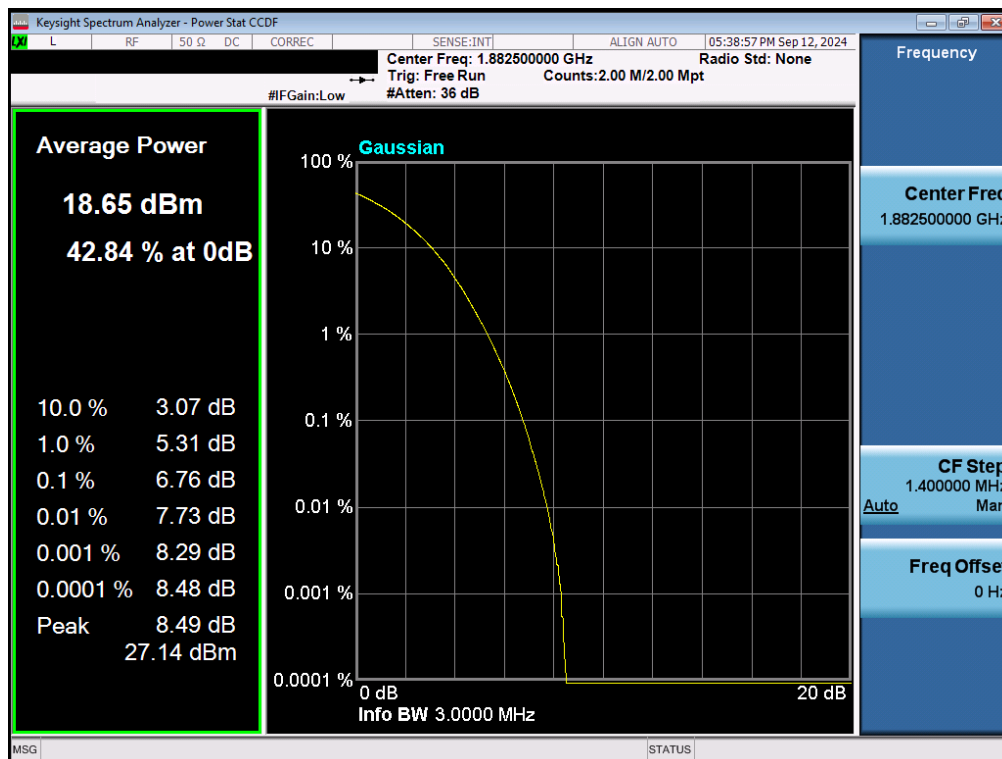


Plot 7-168. PAR Plot (LTE Band 25/2 - 5MHz 256-QAM - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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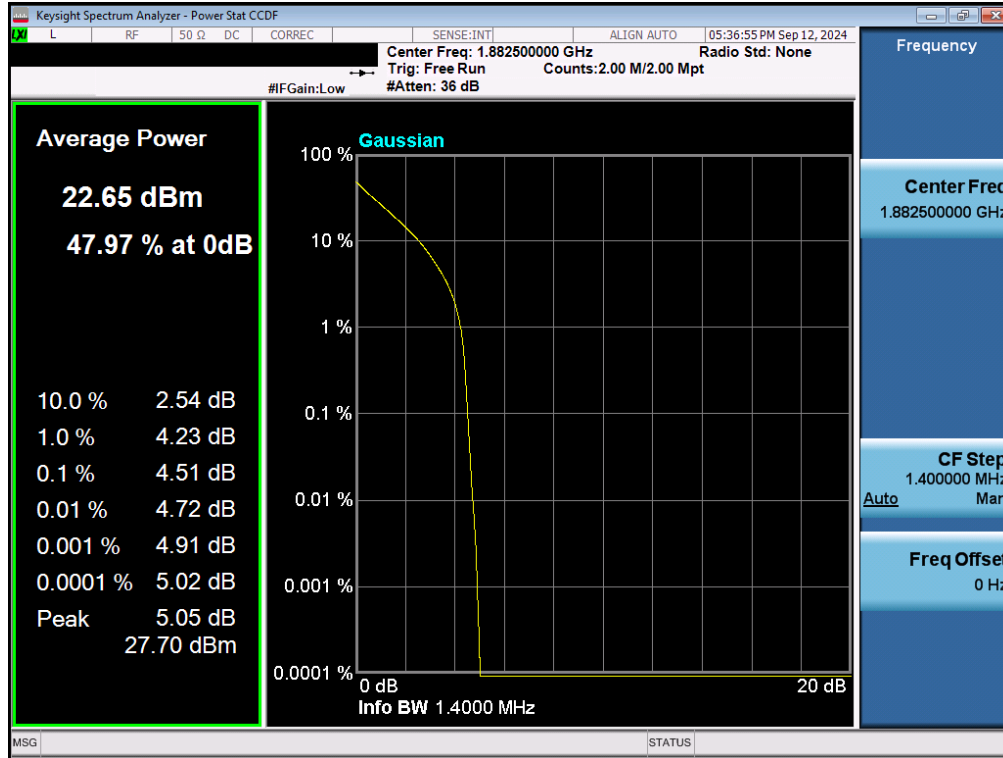


Plot 7-169. PAR Plot (LTE Band 25/2 - 3MHz QPSK - Full RB - Ant1)

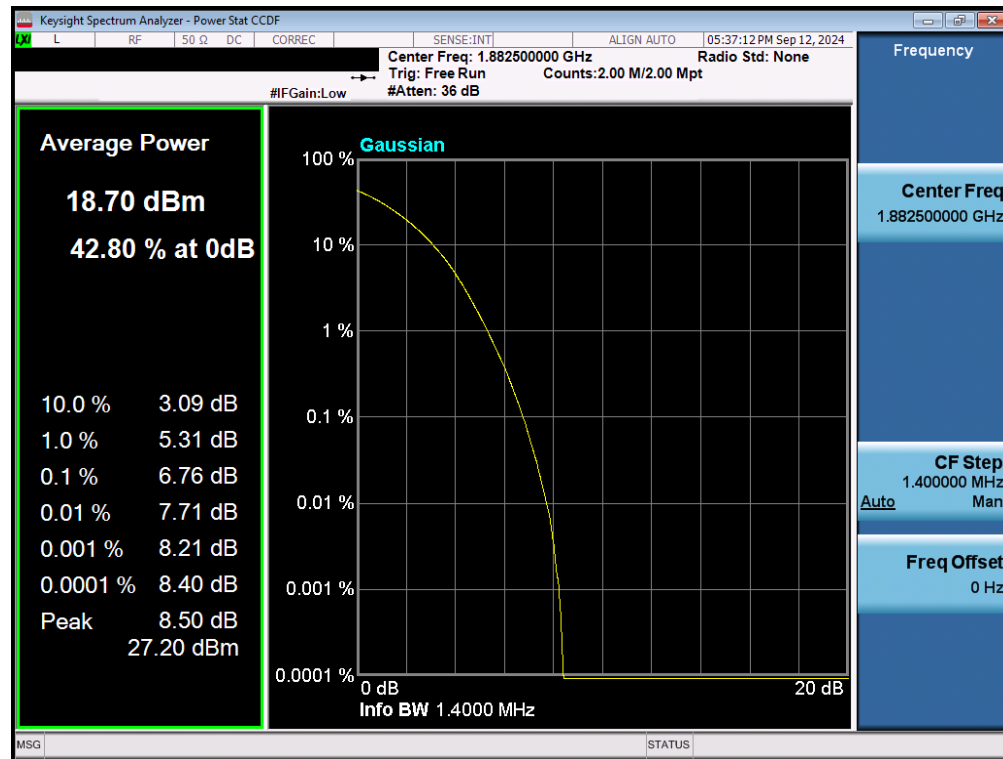


Plot 7-170. PAR Plot (LTE Band 25/2 - 3MHz 256-QAM - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-171. PAR Plot (LTE Band 25/2 - 1.4MHz QPSK - Full RB - Ant1)



Plot 7-172. PAR Plot (LTE Band 25/2 - 1.4MHz 256-QAM - Full RB - Ant1)

FCC ID: A3LSMS938U	PART 24 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2408260067-02-R1.A3L	Test Dates: 09/06 - 10/17/2024	EUT Type: Portable Handset	Page 116 of 174